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Virginia Wildlife

Dedicated to the Conservation of Virginia's Wildlife and Related Natural Resources and to the Betterment of Outdoor Recreation in Virginia

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SEPTEMBER

Volume XXIV/Number 9

IN THIS ISSUE **PAGE**

COVER: Painted turtles bask in the warming rays of early autumn sunshine as the change of seasons approaches. These harmless vegetarians, feeding mostly on algae, are not detrimental to fisheries nor to other valuable forms of wildlife. Engaged in their most characteristic activity, sunning in large groups, they lend an attractive touch to many an outdoor scene. Our artist: Ed Bierly.

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EDITORIAL

CONTROL OF THE GENIE

Woe unto them that join house to house, that lay field to field, till there be no place that they may be placed alone in the midst of the earth! Isaiah.

ACCORDING to a report recently published by Resources for the Future, Inc., a Ford Foundation study group, the United States will almost double its 1960 population by the end of this century, will maintain a strong defense establishment, will continue large scale exploration of outer space, will provide an even higher average living standard than today's, and *will not* run out of the basic natural resources required to fulfill all these national aspirations. Better methods, increased yields, and substitution of more plentiful natural or synthetic materials for scarce ones, all to be accomplished as a result of continuing gains in technology, will provide the escape hatch from scarcity.

But since further technological progress, rather than resource abundance, is seen as the key factor—the "genie" which can make this optimistic prediction come true—the report gives no basis for complacency as far as conservation of wildlife and other outdoor resources is concerned.

Technology, in the context in which the term is used in this study, will produce no substitute evening robin song in an asphalt paved megalopolis; no skein of waterfowl against an autumn sky over drained or filled in wetlands; no trout or bass in harnessed streams that serve merely to pass twice and thrice used effluent from one pollution source to the next.

Nor can this technology create a substitute for the opportunity to find moments of solitude and serenity in leisurely association with natural surroundings; for space—not the kind through which astronauts swing in orbit, but the kind we live in here on earth—is one of the most inflexibly finite natural resources of them all!

The need of every man to be an individual, and every man's inalienable right to become one, is at the very root of our cultural heritage. One cannot even contemplate himself as an individual if he never escapes an environment dominated by other men and their technology. It is a lonesome business indeed, this being an individual, and one must sometimes walk a lonesome road to be one. Each of us needs to be able, from time to time, to examine and measure his own real image, neither distorted by the pressure of a crowd nor blurred by vain ambitions, false idols and frenzied activities of other people.

Some of us need to pit our individual skills against the untamed things of the natural world, not to conquer or destroy them, but to prove ourselves. Some need to test their strength against a mountain, or a wild river. Some need to be cold and wet, and to feel fatigue, in order to understand the value of sleeping warm and dry. Some need to see and feel those things which are not works of man, to have their faith restored—to be reassured that we are not mere waifs in an empty universe.

The assumption that we can rely upon the genius of technology alone, to conquer nature and thereby bring fulfillment of our real aspirations and purposes, is a dangerous fallacy.

The genie of technology may not be entrusted to act alone in shaping the destiny of man, for alone he has neither the soul nor the conscience nor the aspirations of a man to guide him. Technology has to be controlled and guided firmly in the direction we wish to go, lest this genie become master and we slaves—lest he lead us to the prison of an ant hill existence rather than to individual freedom, and leave no man a place to be "alone in the midst of the earth."—J. F. Mc.

LETTERS

More From Massey

DEAR Dr. Massey:

I have enjoyed your article on "The Flowering Dogwood" in the current (June) VIRGINIA WILDLIFE. I am glad you wrote; preservation of it needs emphasis. I am glad to learn about the different species. I once grew *C. kousa*, as well as *C. florida* and *C. rubra*. I have seen great patches of *C. canadensis* in the Great Lakes region. I think *C. florida* makes spectacular spring displays along with *Cercis canadensis*. We have here groves of *Cercis* but scant *Cornus*.

It would be fine if you could contribute other similar notes to the magazine, as Dr. Murray does for the birds.

Arthur Bevan
Churchville, Virginia

Reader Bevan will find more contributions by Doctor Massey on pages 5 and 22 of this issue. Doctor Massey has promised us another article for October.—Ed.

Waterproof!

WHEN the June copy of VIRGINIA WILDLIFE arrived, I somehow left it in the yard, along with a few other belongings. That week end there was about nine inches of rain in this area. After the rain was over I discovered the copy of WILDLIFE saturated with water. I dried the copy out and every word and print was just as clear and fresh as when the copy was received—even the strip with the address on it.

Mrs. E. H. Jenkins
Yorktown, Virginia

Harmless Parasites

I would like to take this opportunity to state that I thoroughly enjoy the VIRGINIA WILDLIFE magazine and look forward each month to receiving my copy. The articles are most informative and enlightening. I greatly appreciate the efforts of the entire staff.

I am a fresh water fisherman and love to spend much time at the sport. I do most of my fishing in the creeks that make up the Chickahominy River basin. Just recently I caught some nice bass and crappie. Unable to eat them all at one time I froze some and cooked them this evening for supper. While eating one of the bass I noticed what appears to be a worm of some sort. I have enclosed the specimen in a piece of foil for your examination. I would be most interested in knowing what it is and if it could have any ill effects on those who might eat fish not knowing that the fish were infected.

Robert H. Farmer
Newport News, Virginia

The worm in your fish is a trematode. There is no danger of the worms infesting human beings even if some should be swallowed alive. The fish you have in your freezer can be safely eaten. However, when fish contain large numbers of these parasites there is naturally a strong prejudice against eating them. These worms were no doubt present in fish when the white settlers first fished the Chickahominy River basin.—Ed.

HUNTERS MUST BEGIN TO POLICE THEMSELVES

By ERNEST SWIFT

GUN-TOTING gangsters and the owners of sporting firearms are rapidly being thrown into the same pot. Each year more legislation to restrict the possession of firearms finds its way into the bill factories of Congress and the state legislatures.

The F. B. I., together with state and municipal enforcement agencies, has been vigorously advocating for some years the registering of all firearms, whether for sale or owned by individuals. The contention of these agencies is that it would reduce robbery, murder and general lawlessness.

On the other side there are several million sportsmen who go afield each fall and are equally determined that their right to possess arms is a constitutional guarantee and should not be abridged. There is also the National Rifle Association, with strong backing from the armed services, which has led the fight for sportsmen and rifle teams to own arms without being suspected of wrong-doing.

Shooting, other than hunting, for competition has been a popular sport since the days of the flintlock; and it is an American tradition, if that counts for anything. Thousands follow this recreation. The N. R. A. obtains rifles and ammunition for its members at reduced prices. They have local firing ranges; they compete among themselves and the best in national and international meets. There are thousands, men and women, who shoot clay pigeons, skeet and trap. It is also mighty big business, and, of course, has the blessing of the arms and ammunition companies.

But over and beyond these many participants in gunnery, there are millions of citizens with no interest in hunting or shooting as a form of recreation. Their views take off in all directions of the compass. Some are indifferent, others passionately opposed to guns because of some incident, factual or otherwise, that developed a built-in repugnance to firearms. Such attitudes are often impressed on young children.

In past years the National Wildlife Federation has supported the National Rifle Association on its stand against unwarranted restrictions on sporting arms, and still does. However, keeping restrictive gun laws off the statute books will rapidly become a rear guard action if interested groups do not bestir themselves and develop a better public understanding.

Each fall there is much to-do regarding gun accidents as a result of hunting. It is legitimate news, but some reporting is biased by including all heart attacks afield as hunting "casualties."

One state reported 951 traffic deaths in 1962, and 31,180 personal injuries were recorded there in 1961. For 1962 the same state reported that firearms were involved in seven fatal hunting accidents, 161 nonfatal hunting accidents, five fatal nonhunting accidents, and 33 nonfatal nonhunting accidents. Heart attacks while hunting claimed 12 victims.

Automobile accidents have become so commonplace that gun and hunting accidents make better horror headlines. However, these comparisons are lost to the nonhunting public; and at the same time they read of robberies at gun point, of murder and of the ease with which gangsters obtain firearms.

Commission photo by Kesteloo

Several million sportsmen who go afield each fall are determined that their right to possess arms shall not be abridged.

Within my own experience there is no question that there is a greater percentage of men and boys in the woods today who are ignorant of gun safety than 50 years ago. The gun has long since lost its daily utility and historical significance as household equipment. Today when a man walks out of his house he does not reach up over the door and take down a loaded 30-30; and boys are no longer sent out with guns to supply the table with fresh meat.

Preaching gun safety in the backwoods was equal to memorizing the commandments against sin. Boys learned early by resting an old "Betsy" over a stump or fence rail. And some got their hides tanned when careless or when they missed a shot. Ammunition cost money, and money did not come easy.

Such training has long been forgotten. Today's boys do not learn proper gun safety, because their fathers are not schooled in it even though they may have been in the army. But Dad—he would never admit it—envisions himself as a counterpart of some bold mountain man.

So each fall we turn loose millions of men and boys who have little knowledge of the lethal weapon they carry and who are mentally unalert to the death and heartache they can inflict by their ignorance. Many are in poor physical condition, which leads to carelessness. They do not know the safety rules of unloading a gun, or how to crawl through a fence or down timber with it. They use their gun to club game, leave the safety off when walking in the field or woods, get the trigger caught in brush, and leave their loaded guns around camp. They are responsible for the worst type of publicity that can be imagined, and their misuse of firearms is the best argument for those who want gun restrictions, even though their activities have nothing to do with bank holdups and homicide.

Much as I dislike more laws, the only way to overcome the accident onus will be by mandatory gun safety training before a hunting license is issued. The standards should

There are also those who go afield with little knowledge of the lethal weapon they carry and who are mentally unalert to the death and heartache they can inflict through their ignorance.

Commission photo by Kesteloo

be tough; eyesight, mental attitudes, and physical fitness should be tested. Hunting eventually must be restricted only to those who have passed a rigid test and are physically and emotionally competent to go afield. This in itself would improve hunting ethics and the pleasure of those who are qualified.

The state conservation departments have been urging legislation toward this end. Most of it is too mild, and legislators have been lackadaisical in passing laws.

Laws pertaining to gun safety, the age of licensees, and intoxication while hunting vary greatly from state to state. Some states still allow guns to be carried in automobiles, others strictly prohibit loaded guns, whether a shell is in the chamber or the magazine. From a safety standpoint, no loaded gun should ever be carried in a vehicle by hunters.

Commission photo by Shomon

No person should go afield with firearms unless he is a master craftsman of the out-of-doors, knows gun safety rules, and is mentally and physically alert.

Practically all conservation departments have greatly improved their gun safety programs, realizing that severe laws may eventually circumscribe the sport of hunting, skeet and trap shooting, and rifle teams.

The time has arrived when hardboiled standards of training for would-be Daniel Boones must take precedent over the number of licenses sold or a wished-for game harvest. Human life will have to come before money and biology.

Many states issue licenses to youngsters but require them to be accompanied by their father or guardian. One state reported that, in one season, hunters under 21 were responsible for 66 accidents, with 35 accidents attributed to the 21-35 age group. Three hunters causing accidents were under 12 years of age; 38 accidents occurred in the age group 12-16; and 25 accidents took place in the 17-to-20 age class.

In many states, boys are considered sufficiently grown up at the age of 16 to be on their own with a gun. Instead of placing the whole responsibility on the conservation warden to ferret out violations of such regulations, a greater responsibility should be required of parents. If regulations of such nature are violated, both the parent and boy should lose their licenses as part of the penalty. This might not fit in all cases, but it would in many.

Sportsmen could also let judges know that they want gun and game law violations prosecuted, and the defendants should be made to realize they have been in court. Judges reflect public attitude. Where the public takes an interest in seeing that game law violators are not mollycoddled by the courts, general lawlessness is much reduced. Good citizenship requires the risk of being unpopular at times.

The father-image has a powerful influence on youth; like father, like son. When gun safety programs are instituted for young hunters and new licensees, the father should be required to attend and take a refresher course in gun handling and conservation laws in general. If the father neglects to attend, then the boy would get no license whether or not he passed the tests.

Fussing and fretting is not going to correct this situation. Every year restrictive gun laws will be introduced, and when finally passed may not be to the liking of many.

Sportsmen should start policing themselves and not be classified with gangsters. Although the sportsmen and gun enthusiasts sometimes disagree among themselves, this is one issue they had better take seriously. Regardless of all the noise that may ensue, no person should go afield with firearms unless he is a master craftsman of the out-of-doors, knows gun safety rules, and is mentally and physically alert. This goes back to the old law of the survival of the fittest. Hunting may not survive as we have indulged in it in the past if strong measures are not taken.

FOOT DISEASE OF DEER IS NO MYSTERY

ON the Conservationgram page of the March issue of *Virginia Wildlife* there is mentioned a "Mysterious Deer Disease . . ." It is a foot infection of hoofed animals which, for many years, has been known to be due to ergot, a fungus which occurs on fescue grass, Kentucky blue grass, and other grasses including rye, wheat, and oats.

The fungus *(Claviceps purpurea)* infects the plant ovary, when the grass is in bloom, completely occupying it, thus preventing the development of the seed. At first the fungus mass, which develops in place of the seed, is sticky and said to be sweet. Later this becomes black and two or more times the size of a normal seed. These black bodies (known as ergot), resemble rat droppings and are conspicuous in the seed head. In rye and wheat the black ergot bodies are much larger than those in the pasture and wild grasses. Ergot also causes abortion in domestic animals, but it develops, however, on the grasses only in the summer after deer have dropped their fawns.

—A. B. Massey

By KATHERINE W. MOSELEY
Arlington, Virginia

IT was just after daybreak on a clear Saturday morning that we were awakened in our week end cabin by an insistent, demanding knock on the bedroom wall. We were startled, for we knew it was too early for callers unless there was an emergency. Then we grinned at each other as we realized the knocker must be our friend, the pileated woodpecker.

Quietly we slipped out of bed to the wide window just in time to look straight into the beady eyes, with the creamy yellow iris, of the giant woodpecker. Of course he immediately flew away in his typical, wavy, galloping flight.

We went outside to see just where he was working and why. Then we blessed him for his call. Boring bumblebees had drilled numerous small holes through the wood siding of our bedroom wall and were, at the time we looked, humming in their deep bass voices while buzzing furiously about.

The pileated woodpecker had undoubtedly discovered their nest behind the faded red wood siding in the week while we were away and the house vacant, for he had chiseled with his heavy, slate-colored bill an opening that gave his long tongue access to the larvae within.

We have been coming to our little place on the Covington River in Rappahannock County for five years on week ends. Most of the land lies in deep forest solitude except for a few acres cleared around the house. Birds of every color, size and song claim the place as theirs. Indeed, they own it more than we as they are the permanent residents, and we are the week end intruders who try to be good neighbors by handing out pounds of birdseed in long-lasting feeders and by respecting their rights as landowners.

We had seen the large excavations in dead stumps close to the house and in old apple trees in the abandoned orchard, and we marveled at the patience of a small woodpecker that could dig a hole that deep and wide.

Then we began to see the king of the woodpeckers. First there would be a quick view of his brilliant red crest and tall black with white-striped body as he banged away while clinging to a tree. As soon as he was aware of our presence he would take flight.

Finally he must have been satisfied that there were only two of us and two harmless Siamese cats and there was no danger, for he came closer to the trees and stumps nearer the house and we could see him in greater detail. Then on this May morning he knocked on our wall.

We happily wrote his name on our honor roll of birds on our land and began to track down all the information we could about him. It seems his wife, whom we have never met, also has a red crest but hers does not include the forehead and she lacks the red streaks along the sides of her throat.

Their home must be in a tall tree in the dense shade of the woodland toward the river, for he always flies off in that direction. We read that their nest would be in a cavity cut in a dead tree 15 to 70 feet above ground with a wide entrance hole about four inches in diameter. Mrs. Pileated lays three to six pure white eggs on the finely chipped fragments of wood in the bottom of the excavation.

The pileated woodpecker is a dramatic bird as he clings, all 18 inches of him, to a tree. His short stout legs are firmly attached to the tree by four sharp clawed toes on each foot, two toes that point forward and two toes backward. His stiff-feathered tail acts as a prop to hold him in an upright position as he works. The short rolling beats of his bill go drumming over the hills.

His flight is swift and silent but not too graceful. His call which we have learned to identify is a long *yarrup, yarrup, yarrup,* repeated in deep full-throated notes, first with a rising and then a falling inflection. These birds are said to be very noisy when nesting.

We had noticed when we found the woodpecker holes there were always ants in the stump or tree. Even what appeared to be a sound apple tree wore a deep feeding hole. These holes were often only a few feet from the ground and, invariably, inside we could see the panic of destructive ants.

The farmers around our place tell us the pileated woodpeckers are saviors of the forest and fruit trees as their diet consists mainly of beetles and ants. Carpenter ants are their favorite but they eat boring beetles from grubs to adults. We personally know they like bumblebee larvae. The powerful birds are able to reach wood-boring grubs in places where the smaller species of woodpecker fail. Their large bodies require a great quantity of food. The only vegetable portions of their diet seem to be wild fruit and acorns.

Our neighbors also tell us these birds are known by many names, Log Cock, Wood Cock, Cock of the Woods, Good Lord Woodpecker, Great God Woodpecker and Lord God Woodpecker. The use of the name of the deity is because they are considered birds of good fortune, and lucky the farmland that boasts of a family of them.

Our personal interpretation of these last names of the bird is that the reaction of anyone who sees this immense, distinguished, flamboyant creature for the first time is likely to say in a small awed voice, "Good—Gracious."

It is greatly feared by the ornithologists that the pileated woodpecker will become as scarce, indeed as nearly extinct, as its kinsman the ivory-billed woodpecker. No one knows quite why, as he is not hunted. Indeed he is prized. The only reasonable explanation seems to be the passing of the great primeval forests which gave him shelter and food. We wish all of these splendid birds could know of the welcome and freedom of the wild bit of land that we own.

THE GENTLEMAN TROUT

By JIM WOOD
Norfolk, Virginia

ALL fishermen have their favorite fish. Many have their favorite for catching and another favorite for eating. A few, of course, like them all. Even though I have a fondness for most of the others, I am afraid that I am partial to the brook trout. The brook trout is the gentleman trout.

The brookie is not a gluttonous fellow. Although he usually feeds well he picks his food with taste, and once he has come fast up out of the water and is hooked he fights with valor. There is no asking for quarter from the brookie. When he comes to the net it is not of his accord.

This trout dresses with the touch of the gentleman, never gaudy. A subdued green and black herringbone, a few spots here and there to lend a speck of color, and that one way of always telling the brook trout from his brethren, the white edge of his fins.

Once the brook trout lived only in the East. His country was from Labrador south to Maine, and down through Virginia and the Carolinas, and in a couple of spots in the Georgia highlands. His favorite home is in the north country, and it is there that he grows the biggest. For many years he didn't get west of the Mississippi in his travels, but now he has been transplanted into the West and is thriving there in that fabulous land. In the years to come that might be the last holdout of the brookie. Essentially he is a wilderness fish and doesn't get on too well in the company of civilization.

The wilderness brookie is the special trout. Find a stream that you can walk all day without seeing another human being, and here you will find the brookie at his best. It is not hard to tell the difference between this wild trout and his brother just out of the hatchery. His colors are deep and true, and his flesh has that tinge of pink that the hatchery diet can't quite match. This fish has been fighting the cold water of the stream all his life, and has had to be a hunter in order to eat. He is a solid fish and good in the pan.

The brook trout, of course, lives in the river and the lake as well as in streams. But the most enjoyable fishing for him is in the small stream. In the north these streams are often thickly lined with alders that are hard on casting style, but I have left flies hanging along the banks of our own Jackson river. The roll cast is a good one on many of our Virginia streams. Each bend in these small streams brings new looking water, and a new expectation, whether it brings a fish or not. Half the fun of fishing these streams is in the stream itself. The next bend might bring a deer standing to his knees in the water, or it might bring a beaver dam with several old broadtails swimming about, or it might bring a trout.

The brook trout will take the dry fly and the wet fly. He will also take a number of other things, the worm likely more than any other. He is at his very finest, though, when he comes to the fly, floating high after it touches the water. He takes it readily until he finds you have imbedded a hook into this bit of what he thought was mouthful of insect; then he is sore that anyone would play such a trick on him.

To kill this trout on a worm seems a sad thing. He takes the worm readily, and often will eat nothing else, but many times he is hooked too deep to remove the hook without killing him. Thus many small trout are turned loose to die later. A small spinner ahead of a worm baited hook rolled down into the fast water is a good combination but one that you will likely abandon after learning to love this trout.

The really good trout are caught with lures that look and act like small fish, the streamers and the spoons. The big brookie wants a man's meal when he dines.

The streamer originated in the Maine woods, and is still used extensively by many there, and exclusively by a few. The streamer is good bait in many places if you work it properly.

If you get into the Maine country to fish, don't ask for the brook trout. In Maine there are no brook trout—only squaretails.

Wherever you find this fish, and whatever you might use to take him, you will find yourself forming a deep affection for him. Maybe it isn't just the trout that causes this. Where you find the brookie, you will also find beautiful country, and loving this land is part of loving the gentleman trout.

Sixth in a series of articles on some of the favorite angling hot spots in Virginia.

PRIVATE BONANZA

By H. LEA LAWRENCE
Johnson City, Tennessee

WILD horses couldn't drag from me the name of my favorite fishing spot in Virginia, nor any price make me divulge its location. But I'll willingly tell you everything else about it, and then if you can find it for yourself, you're free to do so.

My reasons for holding back on pertinent information are simple. This prize fishing spot is just a little stream that meanders through the low hills near the Virginia-Tennessee border, and it is practically unknown to anglers. Most fishermen, in fact, wouldn't give it a second glance, even if they were looking for a place to fish. Even the natives pay it scant attention. But to me it has been a bonanza.

I'll qualify that term "bonanza," if you like. To some fishermen this would indicate that this little stream somehow held fish of lunker proportions, or at least good sized fish in sufficient numbers to present one with the opportunity to come out with an impressive string. This isn't the case at all. However, for those who get a kick out of catching plenty of smaller fish—with the chance of latching on to a larger one infrequently a possibility—it is just what I said it is: a "bonanza"—from the standpoints of fun and sport, plus lots of solitude and elbow room.

Actually, my visits to this tiny piece of water never number more than two per year. I can leave it alone during the springtime, and as the summer passes. But when the first fall colors begin to creep into the trees, and the mornings have a frosty nip, I pack up my fishing kit, grab my fly rod and head for the spot. For it is in autumn that it offers fishing at its best.

In fact, I've come to associate fall fishing with this little stream, and I'd probably feel out of place on it at any other time of the year. The water level is lower in the fall, and the pools take on a deeper, more mysterious look as the floating leaves pile up on their edges and shadow the water. The gnats and mosquitoes have disappeared by then, and fishing is pure pleasure.

The piscatorial offering of this stream isn't very broad, either. Two species, redeyes and smallmouths, comprise its game fish variety, with the former species by far the most abundant. I'll usually take ten redeyes to one smallmouth, but those smallmouths, when they do come along, add that extra thrill that serves to make each trip something special! And once in a while one of these smallmouths can take hold and leave a fellow with trembling knees and gaping jaw—whether he lands it or not. Little streams can hold a few bragging-size fish, too!

I generally use one method to fish this water, although I've tried almost everything during past years. Since I fish there for relaxation and sport, I like to move along slowly, taking it easy and spending as much time enjoying my surroundings as I spend angling. For this reason I use small minnows and a very light leader. I drift the minnow into the deeper part of holes, and into the spots under rocks where the fish hide. The long fly rod gives me plenty of reach, and since the stream is quite narrow, I can wade along and cover every bit of the water easily. Too, with this light equipment I get plenty of action out of anything I take—and both redeyes and smallmouths offer lots of this!

I've found artificial lures work well, too, but somehow this business of drifting minnows—something I never employ throughout the rest of the year—has a special attraction. It's my holiday from artificial lures, so to speak, and it makes for a pleasant change of pace.

There isn't any limit to the number of fish one can take on this stream on a good day, although I seldom keep over eight or ten. Fall weather must whet their appetites, for I have worked a stretch of water where every pool produced at least one fish, and there have been days when I lost count of the number of fish I took and released. I've never had a bad day there, and that's probably part of the charm, but the more important factors of privacy and the truly relaxing atmosphere contribute a great deal more to it. The stream has a special appeal to me that most bodies of water never offer.

It's winter as I write this, and a long time until I get the signal to pack up and head back to the spot. I'll think about it occasionally until that time, and I'll be looking forward to going every time I do. But I don't have to worry about remembering when to go.

Autumn will automatically signal that for me!

Commission Photo by Kesteloo

SPINCASTING PLUGS FOR ROCKFISH

By DON CARPENTER
Outdoor Editor, Washington Daily News

CHESAPEAKE BAY and tributaries striped bass or rockfish are suckers for popping and swimming plugs of various sizes. I learned during the past three years since I introduced this sport in Maryland tidewater. The accent is on spincasting these plugs.

If the reader has experienced the thrill of a bobwhite or grouse bursting from cover, or a pheasant exploding from a thicket, he can imagine the excitement of our gamy striper rising suddenly to take a surface lure in a swirl as large as a bushel basket and with the sound effects of a game bird trying to escape the hunter.

Three years ago plugging for Chesapeake rockfish was almost unknown. Now it is the fastest growing sport on the bay, and it has even extended down into North Carolina waters this past fall. Spincasting plugs now sell by the thousands in tidewater sports stores, and the sale of spinning tackle has leaped skyward. There has to be a reason, and there is.

Sparking this improvement in salt and brackish water fishing is Robert Pond of South Attleboro, Massachusetts, who designed the first successful rockfish plugs over 15 years ago and made them the most popular striper lures in the New England states. Bob whittled his early plugs out of wood by hand. Now he makes his plugs out of plastics in various colors, seven weights and sizes, both swimmers and poppers.

Pan-size rockfish like the quarter-ounce and seven eighths-ounce plugs best. In general, they favor the following colors: green, red-yellow, blue-silver, white—with or without spangles—(Spin-Atoms). Bluefish also hit these lures.

Roaster-size rock favor the larger striper-swiper, junior and big Atoms. The swimmer-type plugs can be adjusted for depth by bending the plug eye (not the face plate) up or down.

Never attach a plug to your line with a *swivel*. This is very important because the plug will work out of balance, lose its normal action, and will take very few fish. *Use only a plain snap*, or tie the lure directly to your monofilament line.

When using a swimming plug, the rod tip is held down and close to the surface of the water, and the lure is reeled in very, very slowly, with lots of tip action by the rod.

Popping plugs are reeled in fairly fast with enough tip action to make the lure pop and throw spray; hold the rod tip high until the lure is close to the boat or shore.

Where the stripers are working on the surface of the water under seagulls, you will frequently find the birds will dive-bomb your lures and try to swallow the plugs. You will hook or foul-hook a lot of gulls and then have to play your feathered prize up in the wild blue yonder, then later to remove a fighting-mad bird from the gang hooks—an unpleasant chore. This bird catching can be avoided by stopping the plug retrieve for a moment, so the bird will lose interest. Plugs fool a lot of birds due to their realistic action in the water.

The removal of gang hooks from a fish can also be a problem and will cause a loss of valuable fishing time while a school of fish is feeding briefly on the surface of the water. I find you can take a pair of pliers and bend the hook barbs flat; then as long as you keep a tight line, the rockfish cannot get away. This permits you to release unwanted fish easily. I do not recommend bending barbs when taking bluefish, because the choppers jump a lot and can throw the hook . . . sometimes straight at you.

When fishing any plug, to be successful the angler must have confidence in his lure and learn to "feel" the plug's action at all times. The lure can be slowed down to make reluctant fish hit, but it should never be stopped. Generally, I halt the outward progress of my lure over the target while casting, and start reeling, so my lure hits the water moving back towards me.

The spinning rod used for plug casting should always have extra-large line guides. A good rule to remember is: The first guide should be as large in diameter as the diameter of the spool on your spinning reel. I usually use 2¼- to 2½-inch diameter guides, tapered down along the rod. These over-size guides greatly reduce line drag and allow longer casts. Also, don't use a rod with a stingy number of guides; line drag can be reduced by keeping the line away from the rod, when there is an arc in the stick.

I find monofilament lines with high visibility in the air and low visibility in the water are best for spin-plugging. For lures up to an ounce, and fish weighing up to 20 pounds, I use only eight-pound-test. For larger fish I like lines testing 10 to 30 pounds. However, you will always get the longest casts with the lighter test lines. Where casting over wrecks or other obstructions and the fish can dive and tangle a plug causing the loss of lure and fish, I generally use slightly heavier line, so I can "horse" the fish into open water for the battle.

A landing net is a "must" for all light tackle spin-casting with plugs, and it pays to use one that is extra-large and with a long handle. Forget the net if you hook a bluefish; the choppers can ruin any net in seconds.

The best length for a spin-casting plug rod is from seven to 10 feet. I find a good all-around length is 7½ feet, built of glass, one piece, with a two-handed grip and very wide plastic reel-seat rings that will not freeze your fingers in cold weather. Carbolite or wear-proof guides and tip will save the loss of a lot of line. Such rods should have good tip action and plenty of "backbone" to propel the lure on its way.

When spin-casting plugs from a boat for rockfish working on the surface of the water, I always run my craft upwind and tide from the school, kill the engine dead and drift to cast. This will assure action until such time as the trolling boats see what you are doing, try to get in the act, run through the school and drive the fish down, ruining the sport for all concerned.

(Continued on page 22)

OUR FOREIGN GAME BIRD POPULATION

By H. J. TUTTLE
District Game Biologist

(Commission photos by Kesteloo, unless otherwise noted.)

VIRGINIA'S Foreign Game Program is in full swing for its fifth consecutive year: and although the ultimate success of the venture is not yet assured, the prospects for an open season for hunting wild pheasants in the Old Dominion in the not too distant future are brighter than they ever have been before.

At least two types of pheasants, one a native of Japan and the other a native of Iran crossed with the Imperial Valley ringneck strain, appear to have established large self-sustaining local populations, and some of the birds may be encountered now in about half of the counties east of the Blue Ridge Mountains. This is not meant to imply that all releases have been uniformly successful, or that birds may be seen in great numbers, but there has been some evidence of reproduction in all release areas, and in some areas the outlook now is most promising. The releases have involved several species and groups, and to expect success from all would have been folly. The reason for experimenting with several groups was to discover which birds would be suitable to Virginia range conditions, and "weed out" those that showed no promise of success.

The current effort to introduce foreign game species into the state began when the Commission of Game and Inland Fisheries entered into a cooperative agreement with the Federal Bureau of Sport Fisheries and Wildlife through which exotic species for experimental introduction would be carefully selected by matching the characteristics of their native ranges with the habitat in which they would be released in Virginia. In addition to comparing the ecology and climate of the birds' native ranges to that of the experimental release areas in Virginia, biologists also took into account in the selections such factors as the birds' habits, their relationship to agriculture, ability to withstand hunting pressure, resistence to diseases and predation, and the possibility of competition with native species. The first birds to reach Virginia arrived at the Commission's game farm in December 1957, and consisted of two groups of Iranian black-necked pheasants, one from eastern and one from western Iran. The first 1600 young birds from the game farm were ready for release in the fall of 1958 and the spring of 1959.

To date a total of 17,160 birds have been released on 38 experimental areas and only one species, the Reeves pheasant, has been marked off as a complete failure. These birds were from game farm stock, and several generations of game farm breeding had made them too domesticated for successful field liberations. This does not rule out completely the future possibilities of the Reeves. It is a wood type bird and might fit well into Virginia conditions if suitable wild brood stock from one of its native ranges can be obtained.

The other experimental groups included the western Iranian, the eastern Iranian, the Japanese green, the kalij pheasant and a partridge type bird known as the black francolin. In addition to these pure species, four hybrid groups from the two Iranian species were developed by crossing with the Imperial Valley Chinese ringnecks, a strain from southern California, and by backcrossing again with the pure Iranians. These four hybrids will be referred to as the F-1 western Iranian *(talischensis)* cross, the western Iranian *(talischensis)* backcross, the F-1 eastern Iranian *(persicus)* cross, and the eastern Iranian *(persicus)* backcross.

All release points of the several groups are widely separated to prevent an overlap in range, and each group is being carefully studied to determine its success and its possibilities of becoming established in Virginia. Unlike the ringneck, which has proved to be a complete failure throughout the Southeast although many thousands have been released in past years, all of these have shown some signs of becoming established. Some groups look better than others, and chances for a successful establishment of exotic game in Virginia may depend on these groups. The next two or three years' efforts will concentrate primarily with these, while a close check will be kept on the others to observe further developments.

With the small number of birds of the original stock, 11 hens and 18 cocks of the Iranian group, production was slow and a long time was required to build up a supply for field liberation. Production of the hybrid groups was much faster and the first stockings were made with these groups, some of which are now in their fifth breeding season. Following is a brief resume of our experience to date with each group.

F-1 Western (talischensis) Cross. The first release made in Virginia, or in fact the United States, was made with this group in Charles City County in 1958. This is an area of extensive farming located in the southeast section of the county, bounded on two sides by the James and the Chickahominy Rivers. Extensive woodland bounds the other two

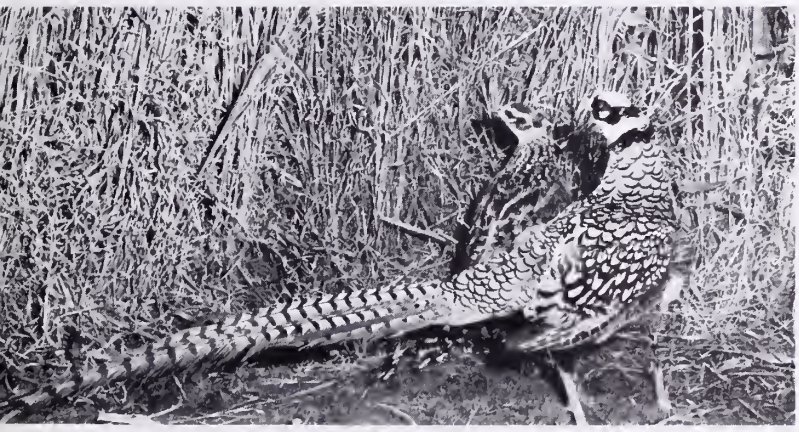
(Continued on page 19)

S ON THE RISE!

Commission photo by Cutler

Over 17,000 exotic game birds have been released in experimental areas. At least two types appear to have established breeding populations in the wild.

The black francolin, a partridge type bird, someday may fill a niche in Virginia's game bird environment.

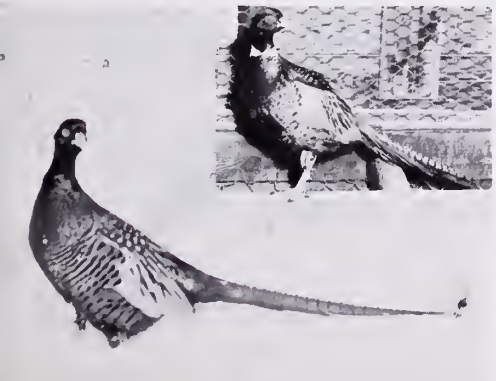


Commission photo by Harrison

Only the experimental stocking of Reeves pheasants has been a complete failure to date.

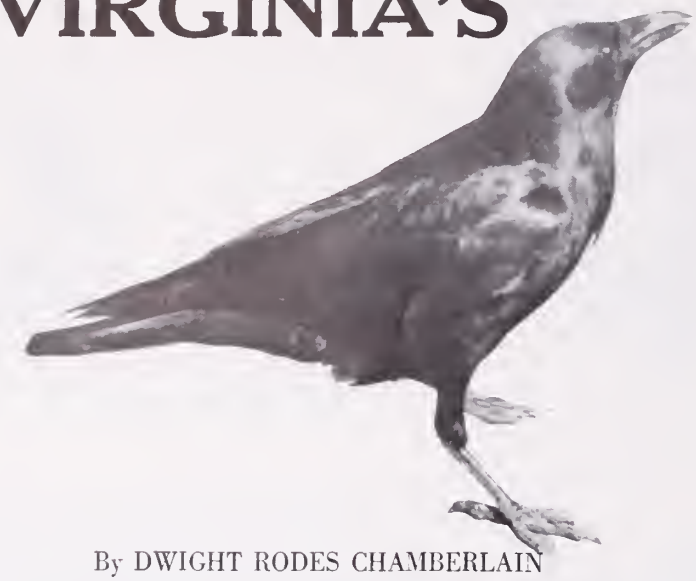
Above: Iranian black-necked pheasants were first exotics to reach the Virginia Game Farm.

Below: Japanese green pheasants bred successfully in the wild this year on the Eastern Shore.



Left: Hybrid birds produced by crossing Iranian pheasants with Imperial Valley Chinese ringnecks (inset) have been most successful.

VIRGINIA'S TOUGHEST REBEL



He has never been afforded protection, and man's hand has been raised constantly against him, yet the remarkably intelligent and adaptable crow thrives and refuses to be crowded out by civilization's advance.

By DWIGHT RODES CHAMBERLAIN
Rochester, New York

AFTER methodically ravaging the Shenandoah Valley, Phil Sheridan sent the following report of his devastation to General Grant: "A crow would have had to carry its rations if it had flown across the (Shenandoah) Valley." It is now evident that Sheridan's cruel approach to confederate annihilation was of vital importance in the final outcome of the War between the States. But his prophecy about the crow shows little knowledge of this interesting and intelligent member of Virginia's fauna.

Historically, the desolation caused by the war was only the initial hardship of a long struggle leading to the present abundance of this species in the Old Dominion. The American crow has never been afforded protection in Virginia, and Bath County even offers a bounty of fifteen cents a head all year round. The use of poisoned grain, tarred seed, and organized crow hunts are ever present dangers to its welfare.

But, I am sure the crows must be laughing at us for there are probably more of them in Virginia now than ever. Both the smaller coastal fish crow *(Corvus ossifragus)* and the eastern *(Corvus brachyrhynchos brachyrhynchos)* and southern *(Corvus brachyrhynchos paulus)* subspecies of the common crow nest here. They are distributed throughout Virginia's irregular topography of agricultural valleys and tidewater flats according to their preference of terrain. In general, the nasal-voiced fish crow is resident along our tidal rivers, in contrast to the common crow's preference for farmland. However, it is not unusual to find both species in a given area.

Regarding the crow's carrying rations or finding slim pickin's, it will eat just about anything and this affords it ample security from starvation during the poorest harvests or worst winters. As a matter of fact, crows are so omnivorous that a few have been known to digest no less than 656 different types of foods in one year. This habit and their remarkable intelligence are the keys to their successful survival in Virginia and elsewhere.

But, ironically, it is the crows' smorgasbord diet that has put man's hand against them from the start. Crows are often responsible for wholesale destruction of duck nestlings, birds' eggs, poultry, and the depletion of newly sprouted cornfields. I once observed seven crows attack and kill a young lamb on a farm near Christians Creek in Augusta County. There was over a foot of snow then; and a meal of fresh lamb *a la carte* had to suffice because their much preferred diet of winter waste corn and sorghums had disappeared beneath the crust. On the other side of the ledger, these corvids also eat large quantities of harmful mice, carrion, beetles, cutworms, grubs, and grasshoppers. Therefore, our crow's economic worth actually depends on its environment. On a national basis, however, with the exception of thickly settled areas, he probably gets himself into more trouble than he can avoid.

Gregariousness may be the only flaw in an otherwise perfect corvine social structure. Precisely, I mean their proclivity to gather nightly in large rookeries during the fall, winter and early spring. Their flight lines (hence the expression "as the crow flies") to these roosts leaves them vulnerable to a clever shotgunner using a great horned owl and crow call combination. But, in Virginia, the crows have risen to the occasion brilliantly. They have either split the larger roosts up into more and smaller groups, or just moved right in where we cannot shoot them anyway.

Five years ago a large flock of crows roosted in the George Washington National Forest east of Steeles Tavern off U.S. Route 11. As every hunter should know, heavy fines may be imposed on any individual caught with loaded guns in a national forest area except during established hunting seasons for game species. During subsequent years, this same group has congregated in the environs of Staunton, on Betsy Bell Mountain or near Bell's Lane, where they have been either protected (within city limits) or extremely difficult to shoot.

Like most of Virginia's customs, a few crow rookeries are worth mentioning as traditional, also. The same band of crows has roosted near Fort Defiance for the past twenty years, and the Dismal Swamp in southeastern Virginia plays host to one of the largest flocks in the state. However, the granddaddy of all Virginia's conclaves would have to be credited to the Arlington roost as it existed in the nineties. Perhaps a fourth of a million birds sojourned there nightly.

Many will shudder, but it is obvious that the crow has waged a very successful battle for its existence in Virginia.

His clan has thrived as portrayed by the ever increasing migratory flights through the Shenandoah Valley—a place where a northern general once remarked that the toughest of rebels would have to skimp.

VIRGINIA WILDLIFE

☆ ☆ ☆ ☆

CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

SIZE LIMIT ON BASS MIGHT IMPROVE BLUEGILL FISHING. Studies of the effects of a fourteen-inch minimum size limit on largemouth bass being carried out at the Game Commission's Front Royal Hatchery, although inconclusive at present, indicate that the size limit may improve bluegill fishing. Data from the first two years of the research study showed a 20% jump in the number of bluegill over six inches in length in ponds where the bass size limit was enforced, while ponds with no minimum bass size limit showed an equivalent drop in average bluegill size. Contrary to popular belief, protecting the small bass resulted in poorer bass reproduction than was found in the ponds which were wide open.

In the ponds where the bass limit was in effect, the bass, being larger, were able to eat the bluegills until they reached a pretty large size. With this constant trimming of their numbers, those few which reached adulthood had more room to grow, more food, and due to their larger size produced more eggs to insure a continuing supply of small bluegills for bass food.

In the no-limit ponds, the bass, although more numerous, were of smaller size and consequently able to eat only the smallest bluegill. Thus, when the bluegill reached medium size (about 4½ inches) they were safe from the bass and the ponds soon became saturated with fish of this size which were consuming all available food and could not grow.

Although the limit ponds produced only about half of the total poundage of fish taken from the no-limit ponds the first year, the production was nearly equal the second. The ponds with the fourteen-inch limit trailed far behind the no-limit in the number and poundage of bass produced. However, fishermen caught and released many bass between ten and thirteen inches. In all ponds censused anglers were able to remove 50% of the available bass in the first three to seven days. Over 70 percent of all available bass had been removed by the end of the first fishing season.

The study will be continued through 1964 to gain more data before any definite conclusions are drawn.

DOVE AND MIGRATORY BIRD SEASONS SET. The Commission of Game and Inland Fisheries selected a split dove season totaling 70 half-days, the same as was in effect last year. The first period (50 half days) extends from September 14 through November 2 and the second (20 half days) runs from December 16 through January 4. The daily bag limit was cut by the U. S. Fish and Wildlife Service from 12 to 10 daily and from 24 to 20 in possession. Slightly lower population counts in the eastern dove management unit prompted the cut.

Rail hunters got the same length season and bag limits they had in 1962. The season on clapper rails, sora rails and gallinules extends from September 23 through November 30. This period was chosen to include three full moons and their associated high tides. Bag limits on clapper rails and gallinules are 15 combined daily and 30 combined in possession. Hunters will be allowed 25 sora rails daily or in possession.

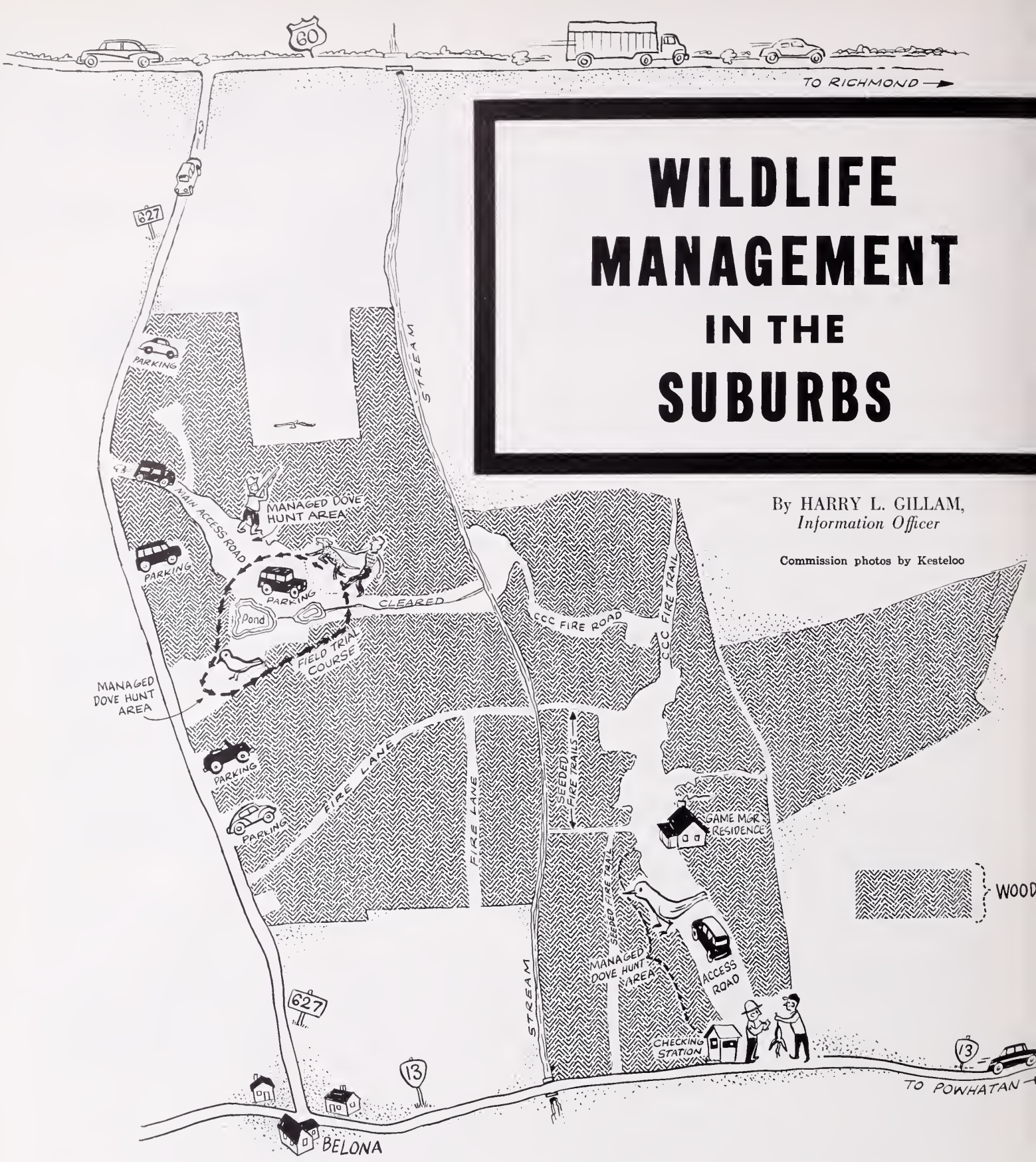
Since woodcock numbers appear to be in good shape, a 10 day increase in the woodcock season was granted. Season dates are November 18 through January 6. The bag limit was increased to 5 daily and 10 in possession. Snipe season was also extended and will run from November 18 through January 1. The bag limit is 8 daily and 8 in possession.

Shooting hours for doves will be from noon until sunset, and for all other migratory birds shooting will be permitted from sunrise until sunset (standard time).

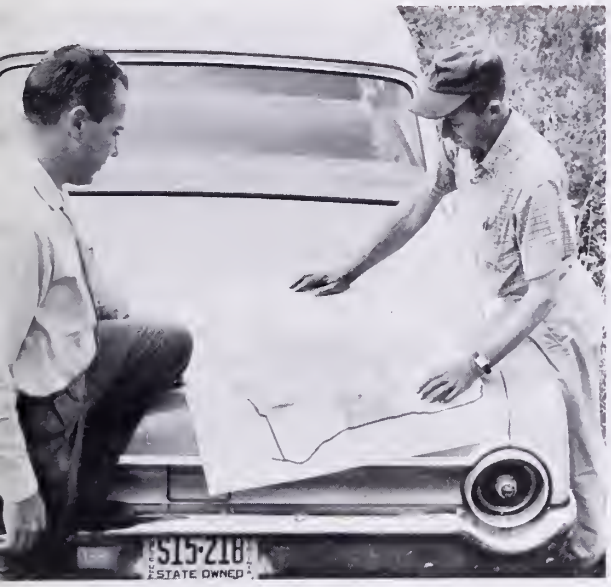
WILDLIFE MANAGEMENT IN THE SUBURBS

By HARRY L. GILLAM,
Information Officer

Commission photos by Kesteloo



Left: The largest of the two fishing ponds on the area. Its open banks should prove popular with flyrod fishermen. Cleared portions of the area (right) support good populations of quail and rabbits.

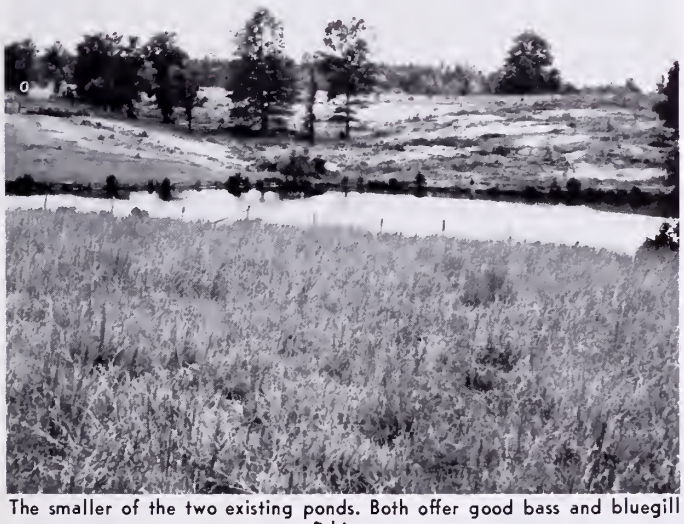


Information Officer Harry Gillam, left, and Game Division Chief Dick Cross examine a map showing management plans for the 2000 acre area.

A wide bottom with sloping sides offers the possibility of a long chain of small ponds similar to the two already in existence.

POWHATAN WILDLIFE MANAGEMENT AREA

Although the Game Commission's new 2,000 acre Powhatan Wildlife Management Area cannot technically be considered in suburban Richmond, it comes pretty close. Located only 33 miles west of the city, it is as close to most Richmond hunters as their daily round-trip to work. How many hunters can the area accommodate? How much game can be produced on such a small area? How much hunting pressure can it stand? These are some of the questions the Game Commission hopes to answer from its experience in managing the Powhatan Area.



The smaller of the two existing ponds. Both offer good bass and bluegill fishing.

One of the managed dove hunting units near the two ponds. The main parking lot will be located near this point.

The Powhatan tract differs from most other wildlife management areas in many respects. It is located in a primarily agricultural area and its soils should be more productive than those found in more mountainous terrain. Consequently, the land cost the Commission about $85 per acre instead of the usual $10-$15 per acre cost for mountainous tracts. The Powhatan area is also one of the smallest Commission-owned Wildlife Management Areas, as most exceed 5,000 acres. Besides the deterrent of high land prices, larger tracts than this are seldom available in agricultural areas. Also, larger tracts are nearly impossible to locate in close proximity to metropolitan areas.

Since most recent surveys of recreational facilities point out a pressing need for recreational areas close to population centers, the Commission is using the Powhatan area as an experiment to see how well this need can be met by small public hunting and fishing areas of this type. If it proves practical, similar areas may be developed near other population centers where facilities of this type are not now found.

The area's gently rolling terrain, small size, and close proximity to good secondary highways should make all parts of it easily accessible to hunters and fishermen. Only one road on the area is to be improved and opened to public traffic at the present time. It will lead from Route 627 on the western side to a parking lot near the two fishing ponds about one-quarter of a mile inside the area boundary. Several parking areas and pull-offs will be constructed along Route 13 and Route 627 on the south and west boundaries allowing hunters to park and enter from these two sides. Fire lanes crisscross the wooded areas at regular intervals, providing easy walking and good locations for deer stands.

(Continued on page 16)

The area is well populated with deer and at least three gangs of turkeys range over the wooded sections. Good populations of squirrels, rabbits and quail are also present. Doves are already abundant in the vicinity, but the Commission hopes to attract even larger concentrations with plantings of millet on the cleared sections. Dove hunters will be allowed on the area on a first come-first served basis each Wednesday and Saturday of the season to take advantage of the anticipated good shooting. A maximum number of hunters to be allowed on the area at one time, particularly during deer season, may have to be set. Otherwise, no special restrictions are planned for the area.

Two well constructed ponds on the area should offer anglers some excellent bass and bluegill fishing. The relatively open banks will make a big hit with fly-rod fishermen. Small boats will be permitted on the ponds, but they will have to be carried from the parking area as no launching ramps are planned. A number of additional pond sites exist on the tract and other small ponds may be constructed at some future time.

A few modifications are being made to establish a field trial course near the pond area. This course will be for use of organized clubs on an advanced reservation basis. Individuals will also be permitted to train dogs on the area under rules and regulations to be set up by the Commission. Because of construction and rehabitation work being done on the area, it is doubtful that it will be opened to the public prior to the opening of dove season on September 14.

Hunters will be required to check in and out at a checking station to be constructed near the main entrance road off highway 13. Accurate information on public use and the harvest of game and fish will be essential to properly evaluate the area. No charge will be made for use of the facility.

John B. Garrett, former Game Manager on Camp Pickett, has been assigned as Game Refuge Supervisor for the area. He will reside on the area and supervise wildlife development and public activities on the new public hunting and fishing facility.

The Powhatan Unit is an experimental area. If it proves successful, it may usher in an era bringing public hunting and fishing opportunity to the very edges of our big cities. If these cities continue to expand at their present rate, a few years hence such areas may be an integral part of the suburban landscape surrounded by subdivisions, golf courses and shopping centers.

Top to bottom: Shown are plantings of millet on the main managed dove hunting unit. The checking station is to be located near the center of the top photo. Hunters will be required to check in and out. The Game Manager's residence is shown in the center scene.

Left: One of the many fire lanes on the area as seen from state route #13. These will serve as hunter access routes and should be excellent locations for deer stands.

HUNT THE TIMBER SALES

By E. V. RICHARDS
Wildlife Staff Assistant
George Washington National Forest

THE red-coated hunter moved slowly up the trail. *It has been a beautiful day to hunt, cool and crisp,* he thought to himself, *but where are the deer?*

He was hunting on the George Washington National Forest in an area where he had killed his last deer six years before. So far, all he had observed was a flash of white crashing through the laurel brush, up at the divide.

Where can they be? he pondered. *Only a couple tracks, too!*

As he moved slowly up the trail cradling his 30-06 in his arms he looked critically at the forest. He thought back to the week before when he had talked to the old farmer, who lived at the mouth of the hollow. The old fellow said many things during their talk about deer hunting. But one thing stuck in the hunter's mind: "You'll find deer in the right fork where the Government timber was cut. Hunt the timber sale."

A rustle of dry leaves brought him out of his reverie. Mostly oaks and maples, with an occasional black gum and hickory, the hunter observed as he paused. Small sawtimber, ten to fourteen inches in diameter, stood like black stove pipes in the white snow. The woods had a naked look. Here and there a green patch of pine broke the black and white monotony of the scene. Down the trail near the stream, hemlocks huddled together in groups as if to keep warm.

Not much deer food, the hunter thought. *No deer sign either. Little low growth on which deer could feed.* He noticed a few small trees struggled to keep alive under the taller trees. *Undergrowth requires sunlight to live. Little sunlight would reach the forest floor here,* the hunter mused. He thought back to the article he had read recently in the State fish and game magazine. It stated a deer needed three to five pounds of woody browse per day in order to survive through the winter months. Looking around he pondered, *How many pounds of deer browse could a deer find here? Not much,* he concluded.

Continuing on up the trail he reached the right hand fork where the District Forest Ranger had made a timber sale four years previously, then took a bulldozed logging road up to the sale area. Things looked different since he last hunted here six years ago. He had heard the Forest Service sold the timber to the Johnson's Mill on the edge of town. Another five minutes of walking brought him to the edge of the timber sale. He noticed deer tracks entering the cutover area from the hillside on his right.

The hunter stood on the edge of a small opening in the forest, reading the story of the timber sale from the cut stumps spread out before him. The stand of timber had been thinned out. Sunlight could reach the forest floor here. In front of him five large trees, about 20 inches in diameter, were cut from timber, leaving a quarter-acre clearing.

He looked around the sale area and could see that groups of these large monarchs were cut. The stumps before him told the story of the harvest of the timber crop. He also noticed these small openings were covered with low brush and undergrowth. Red maples, oaks, black gum, white pine, yellow poplar and dogwood could be found growing among the blackberry, azalea and huckleberry brush which quickly invaded the forest openings. Deer browsing was to be found throughout the cutover area. Tracks were common. Here and there smaller trees were cut. *Probably went to the pulp mill at Covington, Virginia,* the hunter thought. *With all the demand for paper, a lot of trees are used that way.* He looked down at the deer tracks which crisscrossed in the snow before him; the sight of them snapped him back to his hunting.

Slowly he scanned the area ahead of him. The effects of the timber sale were plainly evident. In the skid roads, where a small tractor dug and spun while dragging logs to a landing, the hunter noticed young pine seedlings. He had read that exposed mineral soil was needed for the reproduction of pine. Undergrowth and low tree reproduction could be found throughout the sale area. Here was deer food. Here, also, was small game cover.

The hunter looked at his watch. *Another two hours of hunting,* he observed. *Better get moving.*

Cautiously he continued around the edge of a tangle of downed tree tops. He stopped abruptly. Dry leaves clinging to a red oak shook forlornly in the wind. He took another step. To his right he saw the flash of white! He brought his rifle up automatically, when he heard the snort of alarm. There was his buck, bounding away in a stiff-legged gait from the spot where the animal had bedded down.

At least six points, his brain flashed, as he fixed the bounding deer in the front sight. He fired and the bullet hit true. The buck crumpled and fell with its head in a tangle of greenbriers.

As he walked over to his deer, a nice six pointer, the hunter realized that the cutting of the trees and the deer he had just killed were somehow interrelated. Then it came to him. He realized that the forest was a living thing, just like the deer. Both were crops to be harvested. Mature trees had to be cut to make room for younger, faster growing trees. Young tree reproduction was needed to supply the sawtimber of the future and also feed the deer herd living in the forest. Only through sensible harvesting of sawtimber and pulpwood will a continuing supply of deer food be made available.

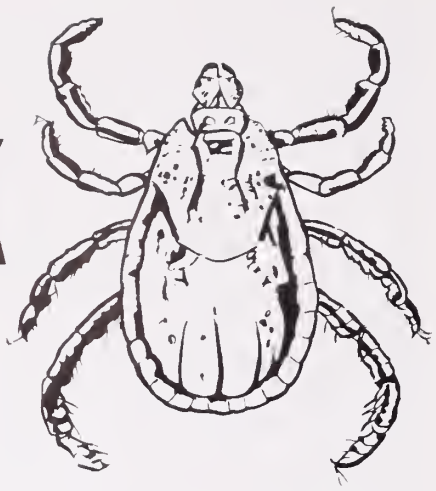
The words of the farmer rang true, "You'll find deer where the timber was cut. Hunt the timber sale!"

Good advice, thought the hunter, as he started the long drag back to the car.

Timber sales open forest canopy, stimulate growth of small game cover and deer food.

Commission photos by Kesteloo

THE TICK



SMALL BUT MIGHTY!

IT'S not unusual to find a tick crawling up on your leg or arm after a walk in a Virginia woods. If he is still crawling, you're safe. If he has "dug in," then you have a problem.

In many parts of Virginia, ticks are among the most annoying pests of man and animals throughout the warm months of the year. The American dog tick, frequently called the wood tick, is of considerable importance because of the part is plays in the transmission of eastern Rocky Mountain spotted fever.

In the past ten years, the Health Department reports 440 cases of Rocky Mountain spotted fever in the Commonwealth. Of these cases, there were 11 deaths. So, this disease-carrying tick is nothing to sneeze at.

Ticks are not insects. Like spiders, they have four pairs of legs in the adult stage. The adult males and females of the American dog tick are oval in shape, almost ¼ inch in length, and brown in color. The females are darker than the males and have a larger area of lines, hairs, and other markings just behind the head.

In the late spring and early summer these ticks attach themselves to dogs and other large mammals where they may spend several weeks. After mating, the females become fully engorged and drop to the ground where they lay eggs for a period of two or three weeks. The six-legged seed ticks, which hatch from the eggs, remain on the ground or on low plants until they are able to find suitable hosts. The principal hosts of this stage of the American dog tick are field mice. Work by the New York State Science Service on Long Island has confirmed the evidence that the white-footed mouse and the meadow mouse are the preferred hosts of the immature stages of these ticks.

After they feed on mice and other rodents, they drop to the ground and change to the adult stage. This is the stage in which humans become the hosts of the tick.

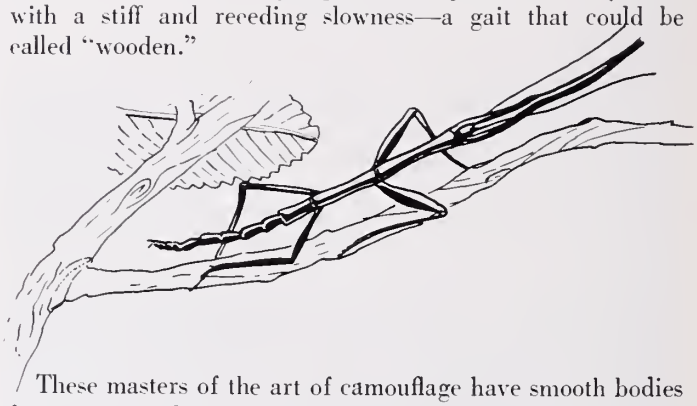
The length of time required for a tick to introduce the spotted fever parasites into the body is probably never less than two hours after the tick starts to feed. After a person has been in an infested territory, a search of the body should be made to locate the ticks that have been picked up, and they should be removed immediately. They should not be squeezed, and the mouth parts should not be broken off and left under the skin. A drop of kerosene, turpentine, or alcohol causes the tick to withdraw its mouth parts. It is further recommended that ticks be handled with tissue paper or forceps. Tick-proof clothing gives some protection.

—George H. Harrison

The walking stick

DID you ever see a stick walking, and on closer examination find the movement was an insect that resembled a small slender twig?

The scientific name for the walking stick is *Diapheromera femorata*, and it is a member of the Orthoptera family, "orthos" meaning straight and "pteron" a wing. However, the walking stick is a wingless member of the family. Orthoptera have chewing mouth parts and usually long legs and antennae. The legs are widely separated in pairs, and they walk with a stiff and receding slowness—a gait that could be called "wooden."



These masters of the art of camouflage have smooth bodies four to six inches in length, and the body diameter is only about ⅛ inch at the most. They are more active at night than during daylight hours. When they are seen it is usually by accident. You may be looking at a small oak tree or any shrub or tree that appears to be stripped of its foliage and wonder what caused the damage. Suddenly what appears to be a bare twig starts to move. This movement reveals the presence of an insect exact in form and coloration to the bark it rests on. This "look-alike" capacity is called protective resemblance, and undoubtedly does help to protect the walking stick from its enemies.

Its food consists largely of foliage. In general, this vegetarian prefers oak foliage, particularly patches of young, second-growth oak. Sometimes they may cause complete destruction of leaves.

Walking sticks are noiseless creatures. Only in fall, when the female is full grown, can you hear their presence. The female drops her eggs, letting them fall where they may. The white with black stripe eggs that look like seeds are dropped one after another at short intervals until three or four hundred eggs are laid. The constant dropping of eggs on the dry leaves sounds like the patter of raindrops. The eggs lie among the leaves until spring, when little green walking sticks hatch out of a sort of "pop-uppable" lid on top and start off for a summer of feeding, becoming full size in six weeks.

Certain kinds of walking sticks have been seen to eject an irritating fluid for several inches. People who have gotten the material in their eyes have suffered intense pain. Stick insects do not spit the fluid, but they secrete it from glands that open along the sides of the body.

If you are ever in the woods on a sunny autumn day and you think you hear the patter of rain, look up on a branch of that small oak tree and see if you can detect a stick walking.

—Dorothy E. Allen

FOREIGN GAME BIRDS (Continued from page 10)

sides, holding dispersal to a minimum. The area, consisting of approximately 6,000 acres, is well broken up by hedge rows, small wood lots, several wet areas unsuitable for cultivation, and vegetative cover of brush and native weeds and grasses. Crops produced are corn, small grain and soybeans, with a comparatively small acreage in pasture. A source of food is present at all times.

The initial stocking was made in the fall of 1958 using 300 birds, and followed in the spring of 1959 with an additional 400 birds. Original plans were to stock an equal number for two or three years and keep a careful check to determine their success in reproduction, the effects of predation, winter losses, and other factors involved in maintaining a population in keeping with the range.

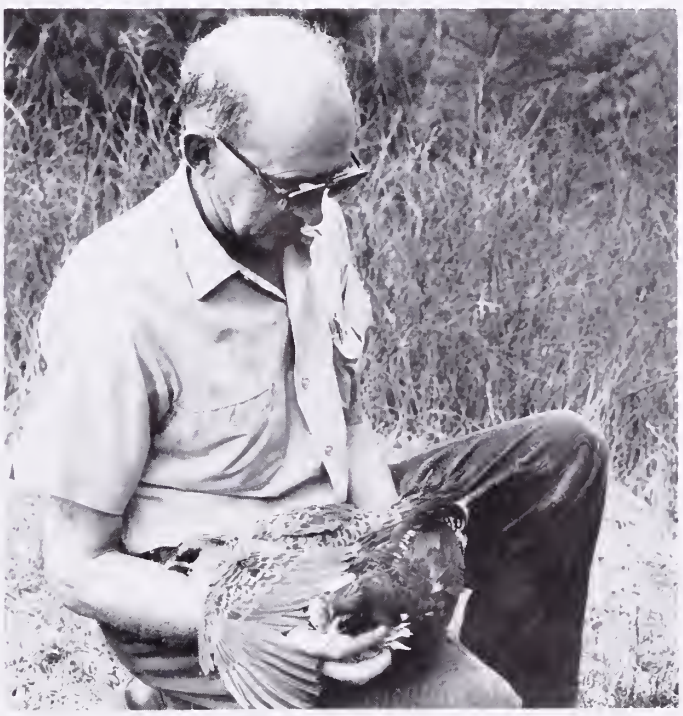
The first breeding season was amazing, and a large number of broods were observed throughout the entire area. Sunrise checks made by the author revealed a total of 23 broods with an average size of 5.1 birds. Census checks with dogs made during the fall and winter months were just as encouraging. On four such checks an average of 21 birds for each hour hunted were flushed, or 233 birds in 11 hours. With the success that appeared to be evident, it was decided to make no additional stocking in the area, but to carefully check over a period of years the success of the original stocking. Winter losses from predation and other causes appeared almost nil, and the birds entered the second breeding season in very fine shape and in good numbers. Checks again revealed good reproduction and a high population was evident. This area is now in its fifth breeding season and each year has shown excellent breeding success, and is maintaining a high population of birds.

Birds from the same group were released in other sections of Charles City County, and also Nottoway, Prince George and Campbell Counties. Range types here are comparable to that in the first area except that the terrain is more open and dispersal might be greater. On all of these areas reproduction has been favorable, and dog censusing has revealed good populations, but perhaps not as great as in the first area where better protection is afforded by virtue of lower density of human population. All areas stocked with this group look favorable, and its continued use is anticipated. On the several areas on which stocking with this group has been made, a total of 4,626 birds have been released to date.

Western Iranian (talischensis) Backcross. This group was first used in Richmond County in the fall of 1959, and in a three year period a total of 1,234 birds had been stocked. One objective in using this hybrid was to determine whether or not reproduction would continue under wild conditions. Evidence indicated it would, as shown by a good number of broods reported. Production was discontinued in 1961, and it is now questionable whether or not the area is maintaining a suitable population. There is some feeling among residents of the county that illegal hunting may have taken a heavy toll. This can neither be proved nor disproved at the present time, but if true it may be a determining factor in the time which will be required to establish a shootable population. No more stocking of this group is planned.

F-1 Eastern Iranian (persicus) Cross. The first release of this group was made in 1958 on a carefully selected range along the Staunton River in Halifax County and was later extended to a continuous range into Campbell and Charlotte Counties, with a total of 1,746 birds being stocked through the fall of 1961. Reports were favorable for the first two years, as some broods were observed and dog censusing showed large numbers of birds, but not as good as the F-1 western group. By the third year populations seemed to dwindle, and by the fourth year to flush birds with dogs was next to impossible. Observations of broods was a rarity. As this decline in the population became noticeable, another area along the James River in Nelson, Fluvanna, Cumberland and Goochland Counties was selected and 2,048 birds of the same group were stocked in these areas. Reports there are a little more favorable, but not as good as in the areas of the western group. Reports coming from other states in the Southeast indicate the same results, and it now appears that the chances for a successful establishment may be less than with the western group. A new trial area was set up in the limestone section of Page County with the stocking of 573 birds in April 1963. Plans call for the stocking of additional birds in that area this year, and unless better prog-

(Continued on page 20)



The kalij pheasant is especially distinctive in appearance. It may find habitat to its liking in western counties, but the success of recent releases cannot be assessed this year.

SCIENTIFIC TRUTH IS FINE *BUT LEGENDS ARE MORE FUN*

By CELESTINE SIBLEY

A LOCAL dogwood fan, seeking to be helpful, wrote in with word for me to pass on to Mrs. K. S. Warren Sr. about where to get a big, frameable copy of the Legend of the Dogwood. Any Franklin, North Carolina, motel, says Mrs. E. R. Mulcahy, and then she threw in extra a piece of intelligence which upset me to no end. Dr. A. B. Massey, of the Virginia Polytechnic Institute, writing in the June issue of *Virginia Wildlife*, says the dogwood legend "is pure writer's fancy and strikingly incorrect."

What's more, pursues Dr. Massey, the tree couldn't have been used as the Cross because it was unknown to the Old World and not discovered here in America until some 1,400 years after the Crucifixion.

Mrs. Mulcahy adds that she has subscribed to this magazine for years and finds it trustworthy.

Okay, there's the scientific word and you can take it or leave it. Personally, I'm not going to relinquish my pleasure in the dogwood legend. My goodness, why else would the dogwood's blossoms have those rusty nail marks on them?

Not believing in the legend of the dogwood would be like not believing that four-leaf clovers are magic because they come in the shape of the cross, or refuting the story that throwing rose leaves on the fire insures good luck.

One of the charms of the plant world is the folk lore surrounding it. Wonderful stories have been woven about the origins of most flowers and trees and nearly all of them endow these plants with human qualities of kindness or courage, which is a pleasant thing to contemplate when you are hoeing or spreading fertilizer. For instance, did you know that fern seed was believed by the ancients to render invisible anyone who carried it on his person?

And there's that fine Indian story about the origin of corn. It seems that in time of famine once a great golden bird, neither eagle nor hawk, came and rested on the ground in the middle of an Indian village. Some of the people wanted to kill him—probably for the pot—but the others refused, taking the bird's remarkable beauty and lack of fear as evidence that he had been sent to them by the sun-god. When the bird flew away a strange new plant sprang up on the spot where it had rested and from that plant—glorious golden grain for people to eat!

And then there's the common white field daisy. They say it came from central Germany with the fodder for the English horses of Burgoyne's army and its real name is "Day's eye"—for the center which is a miniature sun and the white petals which are the sun's rays. The geranium now, legend has it, was once a plain Jane of a plant with no blooms but the prophet Mohammed, after washing his shirt in a river, spread it on the geranium to dry. The little plant blushed at being so honored and its blushes became blossoms.

Goldenrod and aster—oh, no use telling about them. Dr. Massey wouldn't in a million years believe they were little girls bewitched by an old Indian basket weaver. He probably can also prove that wearing a bunch of violets over your heart won't assure you of peace and happiness—but isn't it a nice legend?

Reprinted with permission from *The Atlanta Constitution*, June 18, 1963.

Our Foreign Game Birds (Continued from page 19)

ress is shown there the group will be discontinued, with greater emphasis being placed on the other groups that look more favorable.

Eastern Backcross (persicus). Like the western backcross, this group was developed to check further the capabilities of hybrid pheasants in natural or wild conditions. One area was selected in King George County and a total of 776 birds were released. This covered a period from 1959-61, and favorable reports of reproduction were evident throughout the area, with some indication that the illegal hunting toll might be heavy, resulting in a stable population. Illegal shooting, if it is happening, is a serious problem, and it may occur in some cases despite the careful surveillance of enforcement officers who spend much time in the areas. This area is sparated from Caroline County by the Rappahannock River, and good reports have come from that county indicating that dispersal has extended to the Caroline side of the river and a good population is present. Production of the group has been discontinued, but a careful check will be kept to determine the stocking success.

Western Iranian Pure (talischensis). The area for this release is along the Pamunkey River in New Kent and King William Counties. The first release of 363 birds was made in 1962 and followed by additional releases of 632 in 1963. Since only a small number have had two breeding seasons, to evaluate the success at this time would be impossible. Dispersal has been favorable, however, and brood reports are encouraging, but two or three more years may be necessary for a fair evaluation. There are some indications that this might be one of the better groups and game farm production will continue, even on a larger scale, and additional study areas will be established as rapidly as possible to evaluate more fully their potential for the eastern section of the state.

Eastern Iranian Pure (persicus). This group comes from a range slightly drier than that of the western group and for this reason two release points were selected in the Piedmont section of the state, one in Orange County and the other in Cumberland County. Stocking on the Orange area started in 1961 and was continued in 1962 with a total of 992 birds stocked. Broods have been evident each year, but perhaps to a lesser degree than in the western group. The pattern of agriculture is primarily hay, small grain and corn, with some soybeans. There are some indications that hay harvest may play an important part in the stocking success. After the 1962 stocking was made one farmer reported the destruction of 13 nests in the early harvest of a 15 acre field of alfalfa. Fortunately, the harvest of most hay crops and small grain, where nesting usually occurs, is later, and successful nesting may be completed before harvest is made. No additional stocking is planned for this area, but further studies will be made, and two or three years may be required to determine the success or failure. Present indications are favorable but not outstanding.

A second release point was selected along the Appomattox River in Cumberland County, and 694 birds were stocked in the fall of 1962 and spring of 1963. These birds have not had a complete breeding season, but crowing counts made in the area indicate that adult birds are present in good numbers and the chances for a successful season are favorable. Production of this group is being discontinued at the game farm and will not be continued unless later developments indicate more desirability than is now indicated. This will be determined through studies that are now being made.

The Japanese Green (versicolor). The original stock of this group was received at the Virginia Game Farm in the spring of 1959. The birds were trapped from the wilds of Japan, carried through quarantine and then flown to the United States by Air Express. Game farm production was very successful and the first release was made on the Eastern Shore, Accomack County, in the fall of 1960 with 204 birds, followed by other releases in 1961 of 381, or a total of 585 for the area. A second release area was selected in Northampton County, and in the fall of 1961 and spring of 1962 a total of 511 birds were stocked there. Studies made on both areas have been most encouraging, and brood checks have revealed large numbers of young. Six months after the first release was made in the Northampton County area, a census was made with dogs and 38 percent of the birds released were flushed. Sunrise crowing counts made this spring are exceptionally good, indicating a high population for breeding. This is a most interesting group and will be carefully watched for its possibilities in becoming established in suitable range of eastern Virginia. Two more areas have already been set up in Lancaster and Northumberland Counties this year, with approximately 600 birds stocked in each. Spring crowing counts there were most encouraging and several nests have been reported, but no broods have yet been observed. Work with this group will be continued.

The Kalij Pheasant. This is a mountain type bird that comes from India, and its range is found in very rugged type country in elevations up to 8000 feet, but with limited snowfall in the foothills where the birds come for winter food. Mountains in west and southwest Virginia have good potentials of becoming good kalij range. Several areas have been observed, but only one area has yet been selected. This is in the Dismal Management Area in Giles County, and 138 birds were stocked there in April 1963. It is too early to make any evaluation on this group, but the game manager on the area reports seeing adult birds, although no broods have been observed. Additional stocking will be made, and when the number needed is reached other areas will be selected and stocked. Several years may be needed to thoroughly evaluate this group.

The Black Francolin. This is a partridge type bird approximately three times the size of the bobwhite quail, and comes from the grasslands of India. Its food habits are similar to the bobwhite and may successfully be established in open quail country where clean cultivation does not predominate. Three hundred ten birds of this group were released on three areas, two in Cumberland County and one in Lancaster County, in 1963. The number released and the short time since release was made makes it impossible to attempt a fair evaluation.

To summarize briefly it now looks as if the western Iranian groups and the Japanese greens are most likely to succeed, and special emphasis will be placed on game farm production and the stocking of these groups. The eastern Iranian group will be dropped from the game farm and no more stockings will be made, unless further studies of established areas show a definite need. This can be resumed in a little while if such a need presents itself.

Stocking of the kalij and francolin groups will continue, under present plans, until the need for an increase or decrease in production is determined.

Farmers and sportsmen can contribute a lot to the program by helping in the protection of all these birds. Real pheasant hunting in Virginia may one day be their reward.

The Bald Eagle GOING, GOING...

IT has been estimated that fewer than one thousand bald eagles remain alive in the 48 mainland states, and within recent months at least 50 of these magnificent birds were found dead or in the throes of death. All but one of 45 eagles examined at the Patuxent Wildlife Research Center contained DDT in their tissues, apparently obtained from eating poisoned fish which had eaten small forms of aquatic life which concentrate pesticides from the water that surrounds them.

In the Chesapeake Bay area, only 25 active nests—less than half the 53 found last year—were located in a 1963 spring survey. Young birds were seen in only three of the Chesapeake Bay area nests in 1962, and in only two of the nests observed there this spring.

A Wooded Hill

A boy should have a wooded hill
With winding paths where he may creep,
Playing scout or Indian until
It's time to head for home and sleep.
There should be April dogwood there,
A testament to wonder,
And berry vines that scent the air
With promise of their plunder.
And winding round the tallest trees,
Wild grape festoons where he may swing,
Free as a bird in ecstasies
Beyond our staid imagining.

—Alice M. Swaim
Dillsburg, Pennsylvania

This strange fish, caught in Virginia, was brought to the Commission office by Walter Smith of Richmond. If you can't identify it, turn the page.

Spincasting Plugs for Rockfish

(Continued from page 9)

Plug casting is always poorest on bright sunny days during the noon hours, when the sun is high. It has been learned that rockfish have difficulty seeing plugs on or near the surface of the water in bright light, if the fish are lying deep. However, when the fish are working on the water surface they will hit at any time. Dark or rainy days are always best for plugging. Rock will hit plugs at night, and especially at dawn or dusk.

During September-October-November 1962 I had wonderful sport spin-casting plugs for rockfish in the Chesapeake and especially the tidal rivers in shallow water. Frustrated trollers gnashed their teeth as we plug casters took the lion's share of the shallow water stripers.

Even die-hard watermen and guides who refuse to try any new lures, or do anything but troll, saw what was going on, secretly tried this new wrinkle in fishing, and now practice what they never preached.

Spin-casters with their plugs took rockfish among sunken piling, from weedbeds, and in shallow water right up to the river bank, where it was impossible to troll. Plug casters even found and caught stripers where no gulls were working or even in sight. They fished from shore, waded, and many used rowboats and small outboard motors to make catches as large as any commercial party boat.

The plug casting works daily in certain areas, where schools of bait fish hang out, or where grass shrimp and soft crabs will attract them. I returned evening after evening to make good catches in these areas, and found it did not pay to talk too much or the trollers would ruin the sport for me, while catching almost nothing themselves.

In addition to Atom plugs, I have found that the Pop 'n' Jig lure made by Whopper Stopper of Sherman, Texas, is also a Chesapeake rockfish killer, particularly for stripers weighing up to 10 or more pounds. This lure consists of a fine popping plug (in yellow and black, or white and red) with single treble hook, a ring on the rear end to which is tied a 12-inch nylon leader tipped with a single-hook bucktail (small size).

This Whopper Stopper popper has a fine spray action and erratic motion resulting in the following bucktail having a jigging action. With it, I caught hundreds of rock, blues, perch and even garfish. I predict a big future for the Pop 'n' Jig lure in Virginia tidewater, and it is likely that other lures will be made which will add to this new sport.

It is hard to teach old sea dogs new tricks; but when they see the success others have, they sure learn in a hurry. So keep your poppers hopping.

No strange species, this rockfish with deformed head was landed at Milford Haven last fall by Byron Hudgins of Bon Air.

The Red Maple

By A. B. MASSEY
Virginia Polytechnic Institute

ALTHOUGH we are inclined to associate the maples with New England and the north woods, Virginia woodlands also have their share of these beautiful and useful trees which, when touched by the first fall frost, provide a spectacular display of brilliant scarlet foliage and add a dazzling touch of brightness to the autumn yellows, browns, and deeper reds of the other broadleaf species in whose company they grow.

Red maple is the most common of the eight native species of maple in Virginia. It occurs in a variety of situations but is found most commonly in moist soils of low grounds, stream banks, and swamps. In human economy it is not as important as is the sugar maple. In the lumber industry the red maple is known as a "soft" maple and is not as valuable for furniture manufacture and interior finishing as is the "hard" sugar maple.

The name red maple *(Acer rubrum)* is very appropriate when one sees the redness of the buds in late winter and early spring, the color of the young fruit, which develops before the leaves, but especially the brilliant red leaves commonly developing in autumn. It is a shade-tolerant species which prefers moist broad leaf woodland and swamps. Its growth is rapid but the tree is not as long lived as some other maples. It is sensitive to fire.

In fall and winter wildlife freely utilizes red maple. Deer and other browsers feed on seedlings, branches of young trees and sprouts from stumps. The species is quite tolerant of browsing and commonly develops additional sprouts on the branches and from stumps after having been browsed.

In the spring the winged double fruits (samaras) are taken by birds, squirrels and lesser rodents. Being a tree of low grounds and swamps the red maple is readily available to beavers and is freely cut by them. The sprout growth from the resulting stumps is of benefit to the browsers. Grouse, other birds, and small mammals feed on the buds and flowers. Hence the red maple is of major importance to the wildlife and is attractive to man.

The tree is medium size, attaining a height of 50 to 70 feet. The bark is smooth mottled gray becoming rough with age. The leaves are opposite meaning that two leaves develop on the opposite side of stem at a joint. The upper surface is green, the lower surface light gray. The edge of the leaf is prominently lobed and toothed.

The other native maples of the state are: sugar maple, *Acer saccharum* (common in the mountains but less frequent eastward); silver maple, *Acer saccharinum*, (frequent in the mountains and upper Piedmont); black maple, *Acer nigrum* (occasional in the mountains; some botanists consider it to be a variety of the sugar maple). Mountain maple, *Acer spicatum*, and the striped maple, *Acer pensylvanicum*, are mountain species. The boxelder, *Acer negundo*, occurs throughout the state but is of little value. The southern hard maple, *Acer barbatum*, occurs infrequently in eastern counties.

The Norway maple, *Acer platanoides*, and hedge maple, *Acer campestre*, are introduced European species planted for shade and ornament. The Norway maple is a tree while the hedge maple is a large shrub to small tree.

The Cowbird

By DR. J. J. MURRAY
Lexington, Virginia

ONE thing that everyone knows about the cowbird is that it is a parasite. The female lays plenty of eggs but never builds a nest. Having deposited her egg in the nest of some unlucky small bird, she never gives it another thought. She is a super-modern mother.

It might be expected that with this lack of responsible parenthood the marital relationships of cowbirds would be altogether promiscuous. This, until lately, was taken for granted. However, Dr. Herbert Friedmann, formerly of our National Museum and the leading authority on the cowbirds of all countries, has gathered evidence to indicate that at least in general cowbirds are monogamous. Further, they do not just wander about, putting eggs indiscriminately into any nest they find, but like other birds have a territory to which the female is limited in her laying and which the male defends against other cowbirds. Nor does the female continue laying indefinitely, but is probably limited to about five eggs in a season, which would be a normal clutch if she built her own nest.

In this territory a pair of cowbirds establish themselves early in the spring. They then hunt out a sufficient number of nests of small birds. Their mating time is geared to the nesting time of these birds, so that the female cowbird will not be ready to lay until her unwitting hosts have at least one egg in the nest. The process of putting eggs in the nests of other birds is skillfully done. She usually puts only one egg in a nest, although a neighboring cowbird may slip into her territory and add an egg. Usually the egg is accepted by the unfortunate host, although sometimes a larger bird, like a robin, will throw the egg out, or a yellow warbler will build another layer of nest over it.

The most unfortunate aspect of this situation from the standpoint of everyone except the cowbird is that the cowbird egg has an incubation period of only ten days, which is shorter than that of its hosts, so that it hatches earlier, thus giving the young cowbird a dangerous start over the young vireo or sparrow. It grows faster, is greedier, and by its clamor for food gets more than its share.

The young cowbird finally grows so large that in many cases it pushes the genuine offspring out of the nest, leaving them to die on the ground, while the parents drive themselves to desperation to feed the interloper. Poor things: any open mouth stuck up at them must have food pushed into it; and the larger the mouth and the greater the clamor, which always means the cowbird, the more food it gets. Dr. Friedmann has tabulated over 200 kinds of birds that have been victimized in this way.

The female cowbird is a dull, brownish-gray creature, but the male is a handsome chap, with coffee-colored head and shiny black plumage, with bluish or greenish reflections. In courtship he swells his feathers out into a great ball and struts about with quite an air, showing himself off to the admiring female.

The cowbird gets its name from the fact that it often follows a herd of cows, feasting on the insects stirred up in the grass by the passage of the cattle.

New Shoulder Patch

Members of the Virginia Game Commission field force have been sporting new shoulder patches on their uniforms for the past several weeks. The new emblem is shiny green on a white background. A narrow strip below it identifies the division the wearer is associated with. The new insignia is patterned after those which have been in use on official Commission vehicles for the past year.

Attention Duck Hunters! New Identification Booklet

A new full color waterfowl guide, *Ducks At A Distance*, has just been released by the U. S. Fish and Wildlife Service and it looks like a natural for the bookshelf of every waterfowl hunter. Deviating from the classic "bird book" approach, the 24-page booklet portrays the birds in attitudes most commonly seen by hunters, stressing identification by shape, color pattern, voice, flight pattern, rising views and flock formations.

Illustrated by noted wildlife artist Bob Hines, the booklet shows waterfowl in their fall migration plumage rather than the breeding plumage more often used. The guide's usefulness is not limited to hunters as most bird enthusiasts strive to identify waterfowl under the same adverse conditions which face the hunter.

Ducks At A Distance is available from the Superintendent of Documents, Government Printing Office, Washington, D. C. for 25 cents per copy. For the convenience of clubs and organizations, a 25 percent discount is allowed on bulk orders of 100 or more copies.

DDT Mosquito Control Shows No Effect on Plankton

Recent studies by the Minnesota Department of Conservation indicate that granular compounds containing DDT as used in mosquito control have no lingering effect on other plankton organisms. Except for a slight decrease in plankton a few days after treatment, there was no important difference between treated and untreated ponds. Plankton numbers in treated ponds quickly returned to normal. The DDT compounds sink, forming a thin insoluble layer on the bottom. Mosquito larvae browsing in this layer are killed.

Virginia IWL Delegation to National Convention

Nineteen delegates from Virginia attended the national convention of the Izaak Walton League of America at Cincinnati, Ohio, June 12-15. Re-elected to their respective posts during the meet were chairman of the National Executive Board Reynolds T. Harnsberger of Markham, national directors George P. Grove of Lincoln and J. Wistar Stowe of Lynchburg, and national vice president Claude D. Harris of Alexandria.

Southside Citation Largemouth

Tidewater News photo

This 7 pound 5 ounce lunker from the Nottoway River won a Virginia Wildlife Trophy Fish Citation for H. Derwood Jones, Jr., of Franklin, Virginia.

Youths Qualify as Marksmanship Instructors

These nine youths ranging in age from 18 to 20 recently completed the National Rifle Association Rifle Marksmanship Instructor school sponsored by the University of Richmond Rifle and Pistol Club and graduated as Assistant Instructors. Shown with their instructor, J. W. Courtney, Jr., of West Point (center rear) are (back row, left to right) Clinton Jones, Harry Justice, John Matter, Wayne Styles and (front row) George Aux, Ralph Drayer, George Geron, James Gordon and Walter Greenwood. Geron and Styles are from West Point. The others are from Richmond.

National Recreation Demonstration Area Planned

A mammoth National Recreation Area will be developed by the Tennessee Valley Authority on a narrow 170,000 acre strip of land in Tennessee and Kentucky lying between TVA's Kentucky Reservoir and the Corps of Engineers' Barkley Reservoir. The area will serve to demonstrate the economic recreational value of such an area which has limited timber, agricultural and industrial potential. The shorelines of the two reservoirs lie only six to twelve miles apart for a distance of some 40 miles above the two dams. About half of the land area is currently in federal ownership and will be turned over to TVA for the project.

Said to be situated within 200 miles of nearly 10 million people in the Midwest, the area satisfies the recommendations of the Outdoor Recreation Resources Review Commission. TVA expects to start the project at an early date and will administer it for the 10-year demonstration period. Included in development plans are a waterfowl wintering area and extensive development of the public hunting and fishing potential of the area. The project will help establish and define guidelines for the acquisition, development and operation of other National Recreation Areas.

Edited by DOROTHY ALLEN

Southside Wildlife Association Rodeo

The annual fishing contest sponsored by the Southside Wildlife Association in Blackstone was held June 15. Around 85 youngsters entered the contest. Prizes were given in two age categories for the largest and most fish. First prizes were rods and reels and the second prize winners received casting plugs. The association also served stew to some 200 people who attended. Nelson Phelps, Game Warden, Nottoway County, was assisted by Wardens Fenderson, Dinwiddie County; Collins, Greenville County; Young, Brunswick County; and John Redd, Game Biologist, in helping the association with the contest.

Dryden Rodeo

The annual fishing rodeo sponsored by the Southwest Virginia Sportsman Club was held at Dryden on a Saturday in June. A total of 72 youngsters from 4 through 16 years of age registered for this event.

Prizes donated by local firms were given in the three separate age groups for the most fish caught; the largest fish caught (which was a 16⅜ inch catfish); and the youngest fisherman.

Refreshments were served and a good time was had by all.

Citation Fish

James Rodgers, Conservation Ranger Cheatham Annex, admires Gordon Lattus' 9 lb., 2 oz. largemouth bass caught in Cheatham Lake. Gordon is 12 years old and lives in Washington, D. C. He is enthusiastic about hunting as well as fishing and has completed the youth hunter safety course.

A Fish Derby

The purpose of a Fish Derby or Fish Rodeo is to teach some basic conservation principles to boys and girls in as painless a way as possible. Since so many boys and girls are interested in fishing, either potentially or in reality, the medium of fishing is selected as the "hook" on which to hang a learning experience in conservation.

A Fish Rodeo combines fun, the use of skills, and short, interesting demonstrations of conservation principles.

Before . . . six graders of Ettrick Elementary School become anglers.

Conservation Day

Mrs. Shirley Albright Phillips, sixth grade teacher at Ettrick Elementary School and her students made many discoveries on an all day conservation outing. The morning was spent in two mile nature walks. The students observed over 20 species of birds and discovered bird nests, animal tracks and amphibians. After a picnic lunch the afternoon was spent fishing. Joe Bellamy, Chesterfield Game Warden, explained fishing techniques and the anatomy of fish to the anglers.

It was an educational outing that sixth grade students look forward to every year. Ettrick Elementary School participated 100% in the 16th Annual Wildlife Essay Contest.

Commission photos by Bellamy

After . . . they discover what eats fishing worms.

Fredericksburg's IWLA Fishing Rodeo

The annual fishing rodeo conducted by Fredericksburg Izaak Walton League was held in June at the League's pond. Around 100 youngsters tried feeding worms to fish. Prizes were given to boys and girls for the heaviest fish, the longest fish, and the most fish caught.

The youngsters were treated to hot dogs, soft drinks and popsicles after the contest ended. Medford Haynes, rodeo chairman, had League members and a number of game wardens as his helpers.

Fredericksburg Free-Lance Star photo by Buttram

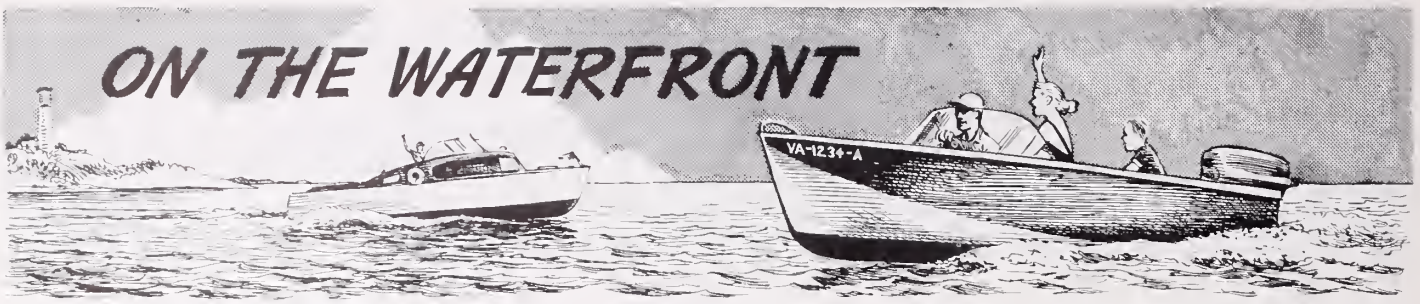
GIRLS' WINNERS—These girls won prizes in the Izaak Walton League fishing rodeo. Left to right: Margaret Snellings, Pam Muse, Linda Mason, Angie Muse, Dale White, Cassie Loving and Catherine Seay.

Lad Gets Present

Neil Obenshain of Roanoke was celebrating his 12th birthday and his "present" was a fishing trip to Philpott. The lad got a surprise. He caught a rainbow trout weighing 3 pounds and measuring 20½ inches.

Roanoke World-News photo by Worley

Neil Obenshain and "birthday present."



Edited by JIM KERRICK

Farm Boating To Be Tested

Before long motorboats may be operating in what is now cropland. The Department of Agriculture's program for converting farms to recreational use is making progress. In March, 27 test areas in 13 states from Maine to Texas were approved under a cropland conversion program established by the Food and Agriculture Act of 1962. On one typical case, an approved project calls for 21 farms, of over 2,500 acres, to be changed into a recreational area offering facilities for boating, fishing, swimming, etc. In some instances Uncle Sam will make Farmers Home Administration loans to pay for the conversion, including flooding land areas to create lakes.

It will take time, but eventually the Agriculture Department program should make boating available to many people now too remote from waterways to consider boat ownership.

—Motor Boating, May 1963

Boat Economy

Economy is the big story in boats this year. Improved production methods have driven prices down. Custom fittings as standard equipment, stripped down models, and low priced aluminum boats are available. Higher quality boats at last year's prices are being offered. Improved features at no extra cost and warranties against defective workmanship or materials are being offered.

Boat Bounce

If your flat bottom boat bounces while at high speed it could be that the bottom of your boat is not wide enough or long enough for your motor. This causes your boat to climb, then slip back into the water only to rise and try once again.

Another possible cause of a bouncing motion is what might be called a "rocker" curve in the bottom of your boat aft, making the boat literally rock on its bottom, back and forth. Check for a rocker by putting a straight edge on the bottom aft, parallel to the keel, in several spots; it should always touch at both ends at the same time. Extending the bottom a little aft on both sides of the motor may help, especially if the trouble isn't a rocker.

New OBC Handbook

Covering state motorboat laws from West Virginia to Maine, the new *OBC Handbook of Boating Laws* is now available from the Outboard Boating Club of America, 307 North Michigan Avenue, Chicago 1, Illinois, for $1.00.

Also included is information on state boat trailer laws and federal regulations.

Summer Rot

In most cases pleasure boaters take good care of their boats during the winter. They either keep their boats under a shed or covered with a tarp.

In the summer a great many boats are tied up at the dock and occasionally used. They are exposed to all kinds of weather. The last time your boat was used, leftovers from the picnic lunch may have been left on board. The anchor rope probably was not dried out. The ice box may have been cut off, but no precaution taken to drain the box. Perhaps the boat was shut up tight with no or little ventilation. The bread molds and the drip from the ice box can start a fungus growth which spreads very rapidly. Eventially portions of the interior of your boat will start to rot. When rot is discovered it may not be necessary to replace the rotten portion of the boat to make it seaworthy again.

There is a new product on the market called calignum which impregnates rotten wood, kills the fungi, then hardens inside. With the application of calignum, the wood is actually stronger and tougher than the original wood. Wood impregnated can be sawed, sanded, drilled and painted without any ill effect. With calignum a boater can repair his boat without electric tools, or the purchase of new wood for the hull

When a ship's carpenter has to tear half of the boat apart to replace a rotten piece of wood, the overall strength of the boat may be weakened.

Contact your local boat dealer for further information concerning this new product, calignum.

Hydrofins

Hydrofin kits are now available for outboard boats ranging from 10 to 18 feet. These hydrofins are said to reduce gas consumption, increase speed and eliminate hull pounding in rough water.

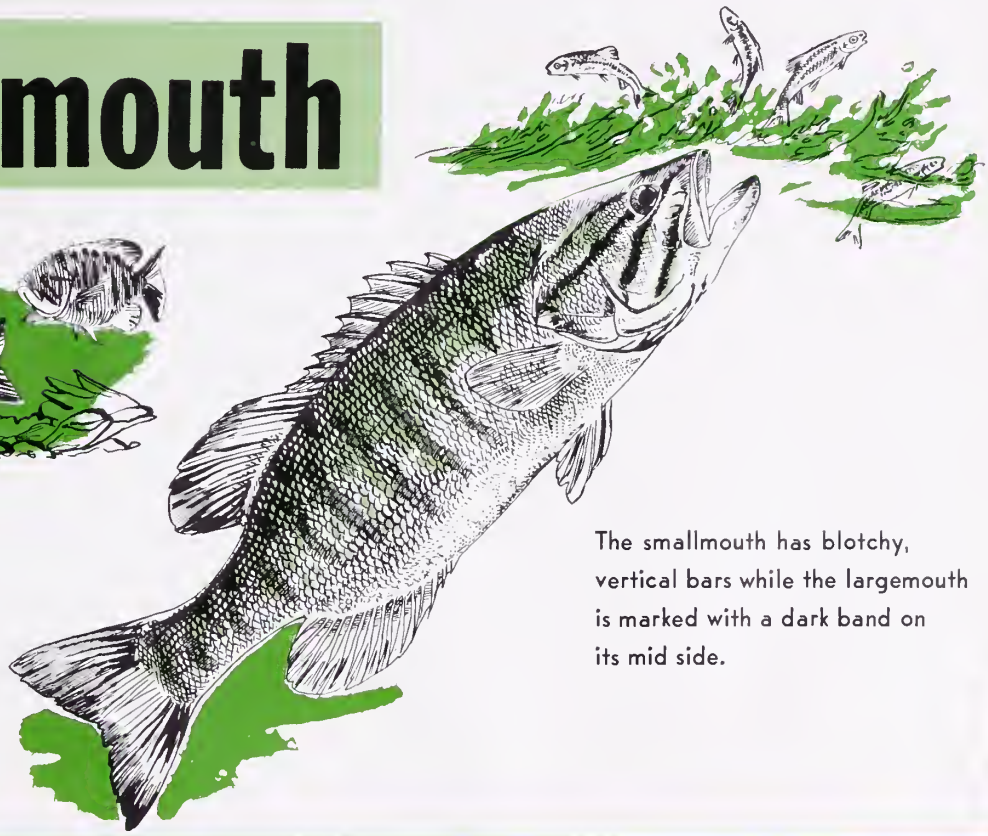
According to the manufacturer the device automatically banks on turns with no side slipping.

The hydrofins can be folded for ease in trailering.

Safety Tip

When winching a boat onto a trailer, stand to one side in case the cable should snap or the hook straighten out. The cable could cause serious injury to you in the event it should snap. Be *careful*.

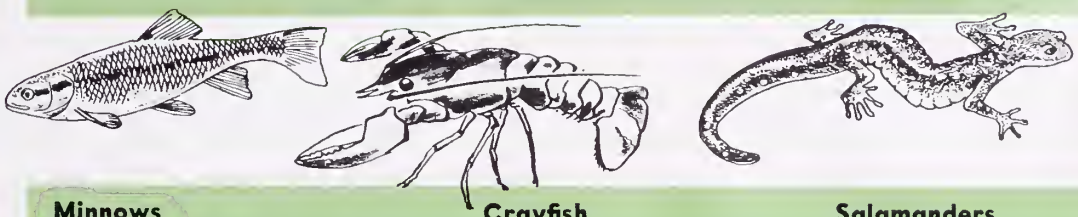
Smallmouth



Coarse gravel or a rocky spot in clean waters is selected as a spawning site. This bass prefers cold lakes and rivers and does not do well in farm ponds.

The smallmouth has blotchy, vertical bars while the largemouth is marked with a dark band on its mid side.

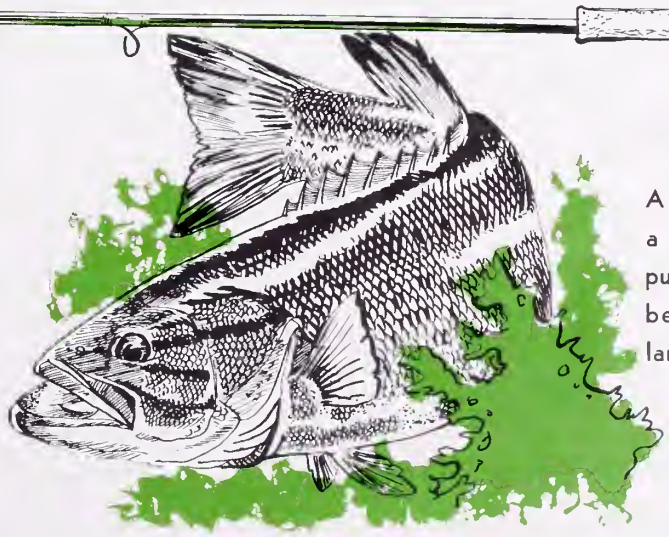
SMALLMOUTH FOODS



Minnows | Crayfish | Salamanders

Smallmouth Tackle

LURES



A four-pound smallmouth is a big one. They hit hard and put up a spirited fight—often better than that of their largemouth cousins.

$3,000.00 IN PRIZES FOR YOU

17TH ANNUAL WILDLIFE ESSAY CONTEST

Approved By
THE VIRGINIA STATE BOARD OF EDUCATION
Sponsored By
THE VIRGINIA COMMISSION OF GAME AND INLAND FISHERIES
THE VIRGINIA DIVISION OF THE IZAAK WALTON LEAGUE OF AMERICA
Endorsed By
THE VIRGINIA RESOURCE-USE EDUCATION COUNCIL
THE RESOURCE-USE EDUCATION COMMITTEE OF THE VIRGINIA ACADEMY OF SCIENCE

SEPT. 16, 1963 - JAN. 15, 1964

WHAT CAN I DO -- NOW AND IN THE FUTURE -- FOR CONSERVATION?

ASK YOUR TEACHER TO
ENTER YOUR SCHOOL NOW

RULES

1. Students from all Virginia schools, grades 5-12 inclusive, are eligible.
2. Essays must be submitted through the schools participating. To be eligible, schools must submit an official entry card to receive materials.
3. Each essay submitted must indicate in the upper right hand corner: County, City, School, School Address, Principal, Grade, Name.
4. High school seniors competing for the scholarship must submit a completed scholarship form, obtainable from contest headquarters, attached to their essays.
5. Essays should not exceed 750 words.
6. Essays will be judged on the basis of originality, effort, grammar, expression and grasp of the subject. Final judging will be made by a panel of judges, representing the Commission of Game and Inland Fisheries, the Virginia Division of the Izaak Walton League of America, and the Virginia State Department of Education.
7. All essays must be sent prepaid or delivered to Commission of Game and Inland Fisheries, Box 1642, Richmond 13, Virginia, and postmarked not later than January 15, 1964. Teachers are urged to send in all essays.
8. School awards will be made on the basis of response and quality of essays.

PRIZES

1 High School Senior Conservation Scholarship $800.00
8 Grand Prize Awards, $50.00 each, one to each eligible grade.
8 Second Prizes, $25.00 each, one to each eligible grade.
24 Third Prizes, $15.00 each, three to each eligible grade.
24 Honorable Mention Prizes, $10.00 each, three to each eligible grade.
Special Mention Prizes, $5.00 each, divided among eligible grades in proportion to response.
School Awards.

The Scholarship Winner and the Eight Grand Prize Winners will come to Richmond as guests of honor of the sponsors and will have their awards presented to them by the Governor. Others will be given their awards in their schools.